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NATURAL HERITAGE PROGRAM LIST OF THE RARE PLANT SPECIES OF NORTH CAROLINA

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Compiled By
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Botanist

North Carolina Natural Heritage Program
Division of Parks and Recreation
N.C. Department of Environment, Health, and Natural Resources 1990

**NATURAL HERITAGE PROGRAM LIST OF THE RARE PLANTS OF NORTH CAROLINA
AND
NORTH CAROLINA PLANT WATCH LIST**

MARCH, 1990

**NORTH CAROLINA NATURAL HERITAGE PROGRAM
DIVISION OF PARKS AND RECREATION
NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH,
AND NATURAL RESOURCES**

**James G. Martin
Governor**

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**List compiled by Alan S. Weakley
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NATURAL HERITAGE PROGRAM LIST OF THE RARE PLANTS OF NORTH CAROLINA
Edition of 2 May 1990

compiled by Alan S. Weakley, Botanist
North Carolina Natural Heritage Program
Division of Parks and Recreation
Department of Environment, Health and Natural Resources

North Carolina has an exceptionally rich and diverse flora, consisting of about 6,000 species of gymnosperms, dicots, monocots, ferns, fern allies, mosses, liverworts, hornworts, and lichens. North Carolina's flora includes boreal plants, more typical of southern Canada, on the high peaks of the Southern Appalachians, subtropical plants (including palms) in the maritime climate of the barrier islands, tropical ferns, mosses, and liverworts around waterfalls in humid mountain gorges, as well as more typical and characteristic species of the Southeastern North American coastal plain, piedmont, and Southern Appalachian Mountains. In addition to those mentioned above, some of the more notable habitats of rare or endemic plants in North Carolina include longleaf pine savannas, mountain bogs and fens, sandhills, piedmont glades and prairie remnants, mountain cove forests, coastal plain limesinks, granite flatrocks, and pocosins. The diverse native flora of North Carolina is a rich part of our natural heritage, worthy of protection for environmental, scientific, economic, aesthetic, and moral reasons.

The North Carolina Natural Heritage Program, as part of its mission to preserve the biological diversity of North Carolina, maintains a systematic inventory of all known locations of rare species. The following list of rare plant species, monitored by the N.C. Natural Heritage Program, includes 582 species, of a total North Carolina flora of about 6,000 species (gymnosperms, dicots, monocots, ferns, fern allies, mosses, liverworts, hornworts, and lichens). All plant species native to North Carolina which are officially recognized by federal or state agencies as protected or otherwise rare are included on this list. This list incorporates the most recent federal status of rare plants, as determined by the U.S. Fish and Wildlife Service and published in the Federal Register on 21 February 1990. The Natural Heritage Program List of the Rare Plants of North Carolina also includes North Carolina legal status information from the most recent version of the List of North Carolina's Endangered, Threatened and Candidate Plant Species, published in February 1990 by the N.C. Plant Conservation Program, which includes

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This list is dynamic, being revised frequently as further data become available. It will be revised at least once a year. If you are using a copy of this list which is more than a year old (check the edition date at the top of the first page), it is invalid and you should request a new version. Further information on these species may be obtained by contacting the North Carolina Natural Heritage Program, Department of Environment, Health and Natural Resources, P.O. Box 27687, Raleigh, NC 27611-7687 or the North Carolina Plant Conservation Program, Department of Agriculture, P.O. Box 27647, Raleigh, NC 27611-7647.

discussion of and information on the legal status of Endangered (E), Threatened (T), Candidate (C), and Special Concern (SC) species.

A separate North Carolina Plant Watch List includes an additional 467 species, which appear to be rare enough to be of conservation concern in North Carolina, but which are not currently inventoried by the N.C. Natural Heritage Program, and are not legally protected or active candidates for legal protection by the U.S. Fish and Wildlife Service or North Carolina Plant Conservation Program. Copies of the North Carolina Plant Watch List are available from the N.C. Natural Heritage Program.

The North Carolina Natural Heritage Program takes the lead role in North Carolina in the inventory of the state's natural diversity, the identification of important natural areas and rare species habitats, and the protection and management of natural areas. It serves as the state's data bank of locality information of natural areas and rare and endangered plant and animal species. It conducts environmental reviews of projects involving state or federal permits or monies, to minimize negative impacts on North Carolina's natural areas and rare species. Many species which lack formal, legal protection are nonetheless imperiled in North Carolina. Therefore, the Natural Heritage Program collects data on species in addition to the three categories of protected plants (Endangered, Threatened, and Special Concern). These additional rare species are placed in two other categories of rare plants: Significantly Rare (SR) and Watch List (W). Definitions of all status categories are listed below, under "North Carolina Status."

The North Carolina Plant Conservation Program, a unit of the Department of Agriculture, is the agency responsible for the listing and protection of North Carolina's endangered and threatened plants, under provisions of the North Carolina Plant Protection and Conservation Act of 1979 (General Statutes 19b 106: 202.12-22), first passed in 1979. The Plant Conservation Program acts under the direction of a Plant Conservation Board and with the advice of a Scientific Committee to maintain and revise the state lists of protected (Endangered, Threatened, and Special Concern) plant species, to investigate protection needs and survival requirements of native plants, to carry out conservation programs, to make and enforce regulations, and to issue permits concerning protected plants. The 102 plant species currently listed as Endangered and Threatened in North Carolina and 174 species that are candidates for listing are published in the List of North Carolina's Endangered, Threatened and Candidate Plant Species: February 1990, available from the Plant Conservation Program (address at bottom of Page 1). That publication also lists North Carolina's Special Concern species and explains regulations and permits regarding protected plants. In general, removal of Endangered or Threatened plants from the wild and their sale or distribution is illegal. Particular regulations concerning collection, propagation, and sale apply to those species (Endangered, Threatened, or otherwise) listed as Special Concern.

Federally listed species are protected by the Endangered Species Act of 1973, as amended. The U.S. Department of the Interior, Fish and Wildlife Service is the federal agency responsible for listing and protecting nationally endangered and threatened species. As of April

1990, there are 18 plant species federally listed as Endangered or Threatened which occur in North Carolina, and one additional species which has been formally proposed for listing. These species are distributed throughout the state, in about half of North Carolina's hundred counties. In addition, 102 species are active candidates for listing.

These three agencies work cooperatively to ensure the continued survival of all of North Carolina's rich flora.

LIST FORMAT. Species are grouped into four groups: Vascular Plants, Mosses, Liverworts and Hornworts, and Lichens, and listed alphabetically by scientific name within each group. The following information is presented for each species on the list.

Scientific Name. Taxonomy and nomenclature of vascular plants (dicots, monocots, gymnosperms, ferns, and fern allies) generally follow A.S. Weakley and J.A. Kartesz's Checklist of the Vascular Flora of North Carolina (in prep.) and J.A. Kartesz's Synonymized Checklist of the Vascular Flora of the United States (1990). Where this differs from the treatment in A.E. Radford, H.E. Ahles, and C.R. Bell's Manual of the Vascular Flora of the Carolinas (1968), the name used in that work is indicated in parentheses. If the species was not treated in Radford, Ahles, and Bell and cannot be identified using that manual, the notation "(not in RAB)" follows the scientific name. If the species is treated in Radford, Ahles, and Bell, but was not indicated as occurring in North Carolina, the notation " (not in NC in RAB)" follows the scientific name. Taxonomy and nomenclature of nonvascular plants (mosses, liverworts, hornworts, and lichens) generally follow H.A. Crum and L.E. Anderson's Mosses of Eastern North America (1981), R. Schuster's The Hepaticae and Anthocerotae of North America east of the Hundredth Meridian (1966, 1969, 1974, 1980), M.L. Hicks's Liverworts of the Mountains of North Carolina (1982), M.L. Hicks's Liverworts and Hornworts of North Carolina (in prep.), M.L. Hicks and P.G. Davison's Some Rare, Endemic, and Disjunct Liverworts in North Carolina (Castanea 54: 255-261 [1989]), R.S. Egan's A Fifth Checklist of the Lichen-forming, Lichenicolous and Allied Fungi of the Continental United States and Canada (Bryologist 90: 77-173 [1987]), and M.E. Hale's How to Know the Lichens, Second Edition (1979).

Common Name. A common name is provided for the convenience of the user. Common names for plants are not standardized, and many plants have no entirely satisfactory common name.

North Carolina Status. Endangered, Threatened, and Special Concern species have legally protected status in North Carolina (Plant Conservation Program). The Natural Heritage Program maintains computer and map files on Endangered, Threatened, Candidate, and Significantly Rare species; paper files are maintained on Watch List species.

E - Endangered. Any species of plant whose continued existence as a viable component of the state's flora is determined to be in jeopardy. Endangered species may not be removed from the wild except when a permit is obtained for research, propagation, or rescue which will enhance the

survival of the species. Sale or distribution of wild-collected Endangered species is not permitted.

T - Threatened. Any species of plant likely to become an endangered species within the foreseeable future. Regulations are the same as for Endangered species.

SC - Special Concern. Any species of plant which requires population monitoring, but which may be collected and sold under specific regulations. Special Concern species which are not also listed as Endangered or Threatened may be collected from the wild and sold under specific regulations. Propagated material only of Special Concern species which are also listed as Endangered or Threatened may be traded or sold under specific regulations.

C - Candidate. Any species for which there is not evidence of declining numbers or threats to the species in North Carolina, but which, because of small numbers of populations, rare habitat, or distribution, may become threatened in the future; or a species suspected of being endangered or threatened, but for which sufficient information is not currently available to support such a status classification. This category was formerly known as Primary Proposed (PP).

SR - Significantly Rare. Any other species which has not been determined as an Endangered, Threatened, Special Concern, or Candidate species, but which has been determined to need monitoring. For most species in this category, actual biological status has not been determined, either because taxonomic validity is unresolved, or because the species is frequently overlooked in the field and could be more common than present data indicate, or because it is a peripheral species common in an adjacent state.

W - Watch List. Other species believed to be rare and of conservation concern in the state but with inadequate information to assess its rarity. The only Watch List species presented on this list are those which also have a federal status. The North Carolina Plant Watch List is available from the Natural Heritage Program as a separate document.

P - Proposed. This prefix indicates a species which has been formally proposed for listing as Endangered, Threatened, or Special Concern, but has not yet completed the legally mandated listing process.

United States Status (as designated by the U.S. Fish and Wildlife Service)

E - Endangered. A taxon that is threatened with extinction throughout all or a significant portion of its range.

T - Threatened. A taxon that is likely to become endangered in the foreseeable future.

C1 - Candidate 1. A taxon for which the Fish and Wildlife Service has on file enough substantial information to list as endangered or threatened. Listing is "warranted but precluded by other pending proposals of higher priority." The Fish and Wildlife Service is "directed to make prompt use of the emergency listing provisions if the wellbeing of any such species is at significant risk."

C2 - Candidate 2. A taxon for which there is some evidence of vulnerability, but for which there are not enough data to support listing as endangered or threatened at this time. Listing is "warranted but precluded by other pending proposals of higher priority." The Fish and Wildlife Service is "directed to make prompt use of the emergency

listing provisions if the wellbeing of any such species is at significant risk."

3A - Candidate 3A. A taxon for which the Fish and Wildlife Service has persuasive evidence of extinction.

3B - Candidate 3B. A name that, on the basis of current taxonomic understanding does not represent a distinct taxon.

3C - Candidate 3C. A taxon that has proven to be more abundant or widespread than previously believed and/or those that are not subject to any identifiable threat. They may be reevaluated for possible inclusion in categories 1 or 2.

P_ - Proposed. Species currently proposed, as either endangered and threatened. Species formally proposed receive some legal protection.

_ * - Possibly Extinct.

North Carolina Rank. North Carolina ranks are based on The Nature Conservancy's system of measuring rarity and threat status. This system is now widely used by other agencies and organizations, as the best available scientific and objective assessment of a species' rarity at the state level.

S1 = Critically imperiled in North Carolina because of extreme rarity (5 or fewer occurrences or very few remaining individuals) or because of some factor(s) making it especially vulnerable to extirpation from North Carolina.

S2 = Imperiled in North Carolina because of rarity (6 to 20 occurrences or few remaining individuals) or because of some factor(s) making it very vulnerable to extirpation from North Carolina.

S3 = Rare or uncommon in North Carolina (on the order of 21 to 100 occurrences).

S4 = Apparently secure in North Carolina, with many occurrences.

S5 = Demonstrably secure in North Carolina and essentially ineradicable under present conditions.

SA = Accidental in state.

SH = Of historical occurrence in North Carolina, perhaps not having been verified in the past 20 years, and suspected to be still extant.

SR = Reported from North Carolina, but without persuasive documentation which would provide a basis for either accepting or rejecting the report.

SX = Apparently extirpated from North Carolina.

SU = Possibly in peril in North Carolina but status uncertain; need more information.

S? = Unranked, or rank uncertain.

Global Rank. Similar to North Carolina ranks, global ranks are assigned by a consensus of scientific experts, the various natural heritage programs, and The Nature Conservancy. They apply to the status of a species throughout its range, and are based on data on the species' status rangewide. This system is now widely used by other agencies and organizations, as the best available scientific and objective assessment of a species' rarity throughout its range.

G1 = Critically imperiled globally because of extreme rarity (5 or fewer occurrences or very few remaining individuals) or because of some factor(s) making it especially vulnerable to extinction.

G2 = Imperiled globally because of rarity (6 to 20 occurrences or few remaining individuals) or because of some factor(s) making it very vulnerable to extinction throughout its range.

G3 = Either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range (e.g., a single physiographic region) or because of other factors making it vulnerable to extinction throughout its range; in terms of occurrences, in the range of 21 to 100.

G4 = Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.

G5 = Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.

GH = Of historical occurrence throughout its range, i.e., formerly part of the established biota, with the expectation that it may be rediscovered.

GX = Believed to be extinct throughout its range (e.g., Passenger Pigeon) with virtually no likelihood that it will be rediscovered.

GU = Possibly in peril range-wide, but status uncertain; need more information.

G? = Unranked, or rank uncertain.

G_Q = Questionable taxonomic assignment.

T_ = The rank of a subspecies or variety. As an example, G4T1 would apply to a subspecies of a species with an overall rank of G4, but the subspecies warranting a rank of G1.

Physiographic Province. The provinces in which the plant is known to occur are indicated. This should not be regarded as the only province(s) of the state in which the species could occur; our knowledge of the flora of North Carolina is still very imperfect. The provinces are abbreviated as follows:

M = Mountains (Blue Ridge). All parts of North Carolina west of the foot of the Blue Ridge Escarpment.

P = Piedmont. All parts of North Carolina east of the foot of the Blue Ridge Escarpment and west of the Fall Line, including outlying "foothill" ranges, such as the Brushy, Uwharrie, and Sauratown Mountains. This province is shallowly underlain by crystalline metamorphic, igneous, or (rarely) consolidated sedimentary rocks.

S = Sandhills. Portions of Cumberland, Harnett, Hoke, Lee, Moore, Richmond, Scotland counties consisting mostly of deep aeolian sands of the Middendorf and Pinehurst formations (Cretaceous to Tertiary age). The Sandhills are really part of the coastal plain but are here distinguished because of their distinctive geomorphology and vegetation. Areas somewhat resembling the Sandhills region but occurring in other parts of the state (such as Carolina bay rims and aeolian or beach ridge deposits in the outer Coastal Plain) are considered part of the coastal plain province.

C = Coastal Plain. All parts of North Carolina east of the fall line, excluding the Sandhills, generally over unconsolidated sands, silts, clays, and peats, though rarely shallowly underlain by consolidated coquina limestone ("marl").

Habitat. The known habitats are described; as with provinces, these should not be regarded as the only possible habitats of the species in the state.

Scientific Name Province: Habitat	Common Name	N.C. Status	U.S. Status	N.C. Rank	Global Rank

VASCULAR PLANTS					
<i>Abies fraseri</i> M: spruce-fir forests	Fraser Fir	W	C2	S2	G2G3
<i>Aconitum reclinatum</i> M: rich coves, seepage slopes, boulderfields, rocky stream banks, mainly assoc. with mafic rocks	Trailing Wolfsbane	C		S2	G2G3
<i>Adiantum capillus-veneris</i> C: marl outcrops	Venus Hair Fern	C		S1	G5
<i>Adlumia fungosa</i> M: coves and cliffs	Climbing Fumitory	SR		S1	G4
<i>Aeschynomene virginica</i> C: tidal marshes and wet ditches	Sensitive Jointvetch	E	C2	S1	G2
<i>Agalinis aphylla</i> C: wet savannas	Scale-leaf Gerardia	C		S2	G3G4
<i>Agalinis decemloba</i> PM: dry, open sites	Piedmont Gerardia	SR		S2	G3G4
<i>Agalinis linifolia</i> C: savannas and other wet, open habitats	Flaxleaf Gerardia	SR		S2	G3G4
<i>Agalinis virgata</i> C: savannas	Branched Gerardia	C		S1	G3G4
<i>Agropyron</i> (see <i>Elymus</i>)					
<i>Agrostis mertensii</i> (= <i>Agrostis borealis</i>) M: high elevation rocky summits and balds	Arctic Bentgrass	C		S1	G5
<i>Allium burdickii</i> (not in RAB) M: cove forests	Narrow-leaved Wild Leek	SR		S1S2	G?
<i>Allium cuthbertii</i> P: low elevation granitic domes	Striped Garlic	C		S1	G3G4
<i>Allium</i> sp. 1 (not in RAB) C: wet savannas	Savanna Onion	SR		S1	G?
<i>Alnus viridis</i> ssp. <i>crispa</i> (= <i>Alnus crispa</i>) M: balds	Green Alder	C		S1	G5T3T4
<i>Amaranthus pumilus</i> C: ocean beaches and island-end flats	Seabeach Amaranth	T	C2	S2	G2
<i>Amelanchier sanguinea</i> M: thin soils around outcrops at lower and middle elevations	Roundleaf Shadbush	SR		S1	G5
<i>Amorpha georgiana</i> var. <i>confusa</i> (not in RAB) C: wet savannas	Savanna Indigo-bush	C	C2	S1	G2T1
<i>Amorpha georgiana</i> var. <i>georgiana</i> CS: moist sandhill areas and floodplains	Georgia Indigo-bush	C	C2	S1	G2T2
<i>Amorpha schwerinii</i> P: dry forests	Piedmont Indigo-bush	C		S2	G2G3
<i>Ampelopsis cordata</i> CPM: floodplain forests	Heartleaf Peppervine	SR		S1	G5?
<i>Amphicarpum floridanum</i> (= <i>A. muhlenbergianum</i> ; not in NC C: clay-based Carolina bays in RAB)	Florida Goober Grass	C		S1	G?
<i>Amphicarpum purshii</i> C: pine savannas and shallow peat burns in pocosin/savanna ecotones	Pinebarrens Goober Grass	C		S2?	G3?
<i>Andropogon mohrii</i> C: wet savannas	Bog Bluestem	C		S1	G3G5

Anemone berlandieri (= A. caroliniana) P: thin soils around rock outcrops	Southern Thimbleweed	C		S1	G3G4
Arabis glabra M: mountain forests	Tower Mustard	SR		S1?	G5
Arabis hirsuta var. adpressipilis (not in RAB) P: thin soils around basic rock outcrops	Hairy Rockcress	C		S1	G5T3T4
Arabis missouriensis (= A. laevigata var. missouriensis) P: thin soils around basic rock outcrops	Missouri Rockcress	C		S1	G4G5
Arabis patens M: thin soils around limestone	Spreading Rockcress	C		S1	G3G4
Arenaria (see Minuartia)					
Arethusa bulbosa M: bogs	Bog Rose	E		S1	G4
Arisaema triphyllum ssp. stewardsonii (not in RAB) M: bogs	Bog Jack-in-the-Pulpit	SR		S1?	G5T3
Aristida palustris (= A. affinis) C: wet savannas	Longleaf Three-awn	C		S1	G4
Asclepias pedicellata C: dry savannas	Stalked Milkweed	C		S1	G3G4
Asclepias tomentosa S: sandhills	Sandhills Milkweed	C		S1S2	G3G4
Asplenium bradleyi PM: acidic rock outcrops and cliffs	Bradley's Spleenwort	SR		S1	G3
Asplenium heteroresiliens C: coquina limestone (marl) outcrops	Carolina Spleenwort	E	C2	S1	G2
Asplenium monanthes M: outcrops near waterfalls in escarpment gorges	Single-Sorus Spleenwort	E		S1	G4?
Asplenium ruta-muraria M: limestone outcrops	Wall-Rue	SR		S1	G5
Aster avitus (not in RAB) M: thin soil around granitic outcrops	Alexander's Rock Aster	C	C1	SR	G1
Aster carolinianus C: wet sites	Climbing Aster	SR		SH	G5
Aster depauperatus (not in RAB) P: diabase glades	Serpentine Aster	C	C2	S1	G2Q
Aster georgianus (not in RAB) P: thin woods to open sites	Georgia Aster	C	C2	S1	G?
Aster laevis var. concinnus P: forests, woodland borders especially over mafic rocks	Smooth Blue Aster	C		S2	G5T3
Aster mirabilis (= A. commixtus) P: rich slopes and bottomlands	Piedmont Aster	C		S2?	G2?
Aster oblongifolius M: thin soils around limestone outcrops	Aromatic Aster	SR		S1	G5
Aster shortii (not in RAB) M: bluffs and rocky banks	Short's Aster	SR		S1	
Astilbe crenatiloba (not in RAB) M: habitat not known	Roan False Goat's Beard	W	C2	SR?	GHQ
Astragalus michauxii SC: sandhills	Sandhills Milkvetch	C	C2	S2	G3
Baccharis glomeruliflora C: shrubby areas on margins of brackish marshes	Silverling	C		S1	G4
Bacopa innominata (= B. cyclophylla) C: tidal freshwater marshes	A Water-Hyssop	SR		SH	G5

Balduina atropurpurea (not in NC in RAB) C: savannas	Honeycomb Head	C		S1?	G2G3
Baptisia australis var. australis P: glades and open forests on basic soils	Blue Wild Indigo	SR		S2	G5?T3
Berberis canadensis P: open forests and glades on basic soils	American Barberry	SR		S2	G3G4
Betula papyrifera var. cordifolia M: high elevation forests and landslide scars	Mountain Paper Birch	C		S2	G5T5
Bidens coronata C: brackish marshes	Crowned Beggarticks	SR		S1	G5
Bonamia (see Stylisma)					
Botrychium jenmanii (= B. alabamense) MP: moist woods	Alabama Grape Fern	SR		S1	G3G4
Botrychium lanceolatum var. angustisegmentum (not in RAB) M: cove forests	Lance-leaf Moonwort	SR		S1	G4T3T4
Botrychium matricariifolium (not in RAB) M: cove forests	Daisy-leaf Moonwort	SR		S1	G5
Botrychium multifidum (not in RAB) M: grassy balds	Leathery Grape Fern	C		S1	G5
Botrychium oneidense M: cove forests, bogs	Blunt-lobed Grape Fern	C		S1	G3?
Botrychium simplex (not in RAB) M: open, grassy sites	Least Moonwort	C		S1	G5
Buckleya distichophylla M: bluffs, dry slopes, forests on lower slopes	Piratebush	E	C2	S2	G2
Bulbostylis warei C: open sites	Ware's Hairsedge	SR		S1	G3G4
Bumelia (see Sideroxylon)					
Cacalia ovata (= C. lanceolata) C: wet savannas	Savanna Indian-plantain	SR		S1	G4G5
Cacalia rugelia (= Senecio rugelia) M: spruce-fir forests	Rugel's Ragwort	T	C2	S3	G3
Cacalia suaveolens M: bottomlands?	Sweet Indian-plantain	C		SH	G4?
Calamagrostis cainii (not in RAB) M: high elevation rocky summits	Cain's Reedgrass	PE	C2	S1	G1
Calamagrostis canadensis M: high elevation openings	Canada Reedgrass	SR		S1	G5
Calamagrostis porteri (not in RAB) M: middle elevation ridgetop forests	Porter's Reedgrass	SR		S1	G4
Calamovilfa brevipilis CS: savannas, sandhill seeps	Pinebarrens Sandreed	E	3C	S1	G3
Caltha palustris M: boggy sites	Marsh Marigold	SR		S1	G5
Calystegia catesbiana ssp. sericata (= C. sericata) M: open, sunny sites	Blue Ridge Bindweed	SR		S2	G3T2T3
Camassia scilloides (not in NC in RAB) CP: rich levees, slopes, and bottomlands	Wild Hyacinth	T		S1	G4G5
Campanula aparinoides M: bogs and other wet, open sites	Marsh Bellflower	SR		S1	G5
Cardamine clematitis (sensu stricto) M: high elevation seeps, shaded outcrops, and streambanks	Mountain Bittercress	C	C2	S2?	G2

Cardamine dissecta (= Cardamine angustata var. multifida)	Dissected Toothwort	SR		S1	G?
PM: rich woods, cove forests, bottomlands					
Cardamine douglassii	Douglass's Bittercress	SR		S2	G5
P: bottomlands, rich lower slopes					
Cardamine flagellifera (not in RAB)	A Bittercress	C		S2	G3
M: seeps, streambanks					
Cardamine longii (not in RAB)	Long's Bittercress	SR	3C	S1	G3G4
C: tidal marshes and tidal cypress-gum forests					
Cardamine micranthera	Small-Anthered Bittercress	E	E	S1	G1
P: seeps and streamside sandbars					
Cardamine rotundifolia	Mountain Watercress	SR		SH	G4
M: seeps, banks of mountain brooks					
Carduus (see Cirsium)					
Carex aenea	Fernald's Hay Sedge	E		S1	G5
M: grassy balds					
Carex argyrantha	Hay Sedge	SR		S1	G5
M: wet meadows					
Carex barrattii	Barratt's Sedge	E	3C	SH	G3
MS: bogs, open wet areas					
Carex biltmoreana	Biltmore Sedge	C	3C	S2	G2
M: granitic domes and other cliffs and outcrops					
Carex bushii	Bush's Sedge	SR		S1	G4
M: open wet areas					
Carex buxbaumii	Buxbaum's Sedge	C		S1	G5
M: bogs and fens					
Carex canescens ssp. disjuncta	Silvery Sedge	C		S1	G5T4?
CS: open wet areas					
Carex chapmanii	Chapman's Sedge	T	C2	S1	G2G3
C: moist bottomlands and slopes, perhaps associated with marl					
Carex cherokeensis	Cherokee Sedge	SR		SH	G4G5
MP: floodplains					
Carex collinsii	Collins's Sedge	C		S1	G4
SM: white cedar swamps, bogs					
Carex conoidea	Cone-shaped Sedge	T		S1	G4
M: bogs					
Carex cristatella	Small Crested Sedge	SR		SH	G5
M: grassy balds, bogs					
Carex crus-corvi	Crowfoot Sedge	SR		S1	G5
C: swamp forests					
Carex decomposita	Cypress Knee Sedge	SR	3C	SH	G3G4
C: blackwater swamp forests					
Carex eburnea	Bristle-leaf Sedge	SR		S1	G5
M: calcareous outcrops					
Carex exilis	Meager Sedge	C		SX	G5
S: seepage bogs					
Carex impressinervia (not in RAB)	A Sedge	C	C2	S1	G2?
P: wet forests					
Carex leptoneura	A Wood Sedge	C		S1	G4
M: rich cove forests and seepage slopes					
Carex manhartii (not in RAB)	Manhart's Sedge	C	C2	S1	G2?
M: rich cove forests					
Carex misera	Wretched Sedge	T		S3	G3
M: high elevation rock outcrops					

Carex oligosperma (not in RAB) M: seeps and bogs	Few-seeded Sedge	C	S1	G4
Carex pedunculata (not in RAB) M: rich cove forests	Longstalk Sedge	C	S1	G5
Carex projecta CMP: bogs, marshes, swamps	Necklace Sedge	C	S1	G5
Carex purpurifera M: rich cove forests	Purple Sedge	E	C2	SRF? G3?
Carex reniformis CP: swamps, open wet areas	Kidney Sedge	SR	SH	G4?
Carex roanensis (not in RAB) M: forests	Roan Sedge	C	C2	SR G1
Carex schweinitzii M: bogs and swamp forests	Schweinitz's Sedge	E	S1	G3
Carex tenax S: sandhills	Strong Sedge	SR	SH	G5?
Carex tetanica C: bogs and swamps	Rigid Sedge	SR	S1	G4G5
Carex trisperma M: bogs, wet forests at high elevations	Three-seeded Sedge	SR	S1	G5
Carex turgescens S: seepage bogs	Swollen Sedge	SR	SH	G3G5
Carex verrucosa CS: savannas and pinelands	Warty Sedge	SR	S1	G5
Carex vestita P: low woods	Velvet Sedge	C	S1	G5
Carex woodii M: forested slopes, cove forests, and northern hardwoods	Wood's Sedge	SR	S2	G4Q
Carya laciniosa C: brownwater river levees	Big Shellbark Hickory	C	S1	G5
Carya myristiciformis (not in NC in RAB; = C. myristicaef.) C: wet marl forests	Nutmeg Hickory	T	S1	G5
Chamaesyce cordifolia (= Euphorbia cordifolia) C: sandhills	Heartleaf Sandmat	SR	S1	G5
Chasmanthium nitidum (= Uniola nitida) C: blackwater bottomlands	A Spanglegrass	C	S1	G3?
Cheilanthes alabamensis M: calcareous outcrops	Alabama Lip-fern	SR	S1	G5
Chelone cuthbertii M: bogs	Cuthbert's Turtlehead	C	S3?	G3
Chenopodium simplex (not in RAB) M: shaded soil at bases of cliffs	Giant-seed Goosefoot	SR	S1	G?
Chloris (see Eustachys)				
Chrysoma pauciflosculosa (=Solidago pauciflosculosa) C: sandhills	Woody Goldenrod	C	S1	G4G5
Cirsium carolinianum (= Carduus carolinianus) P: forests and disturbed areas, mostly on basic soils	Carolina Thistle	C	S1	G5
Cladium mariscoides CSM: bogs, fens, brackish marshes, sandhill seepage bogs	Twig-Rush	SR	S1	G5
Clematis glaucophylla M: habitat not known	White-leaved Leatherflower	SR	SH	G3?
Coeloglossum viride var. virescens (= Habenaria viridis) M: seeps in cove forests	Long-bracted Frog Orchid	SR	SH	G5T5

Collinsonia tuberosa	Piedmont Horsebalm	C	S1	G3G5
PM: rich hardwood forests				
Collinsonia verticillata	Whorled Horsebalm	C	S1	G2G3
PM: cove forests				
Conioselinum chinense	Hemlock-parsley	C	S1	G5
M: high elevation seepage slopes				
Coreopsis latifolia	Broadleaf Coreopsis	C	3C S3	G3
M: cove forests and other rich woods				
Cornus asperifolia	Roughleaf Dogwood	SR	S1	G?
C: wet marl forests				
Crinum americanum (not in RAB)	Swamp-lily	C	S1	G5
C: tidal swamp forests, tidal marshes				
Croton monanthogynus	Prairie-tea Croton	SR	S1	G5
M: calcareous rock outcrops				
Cyperus dentatus	Toothed-leaf Flatsedge	C	S1?	G4
C: marshes				
Cyperus houghtonii	Houghton's Flatsedge	C	S1	G4
P: dry soil				
Cyperus lecontei	Leconte's Flatsedge	SR	SH	G4?
C: limesink ponds				
Cyperus tetragonus	Four-angled Flatsedge	SR	S2	G4?
C: maritime forests and barrier island grasslands				
Cypripedium reginae	Showy Ladyslipper	C	SH	G4
M: habitat not known				
Cystopteris tennesseensis	Tennessee Bladder-fern	E	S1	G5
CM: calcareous rock outcrops				
Dalibarda repens	Robin Runaway	E	S1	G5
M: bogs and moist woods under rhododendrons				
Delphinium exaltatum	Tall Larkspur	E-SC C2	S1	G3
MP: grassy balds, glades, woodlands, mostly over mafic rock				
Deschampsia cespitosa ssp. glauca (= D. caespitosa var. g.)	Tufted Hairgrass	C	S1	G5T5
M: olivine barrens, high elevation outcrops of mafic rock				
Desmodium ochroleucum	Creamy Tick-trefoil	SR	S1?	G5?
P: sandy or rocky woodland openings				
Desmodium sessilifolium	Sessile Tick-trefoil	C	SH	G?
P: open woodlands				
Dicentra eximia	Bleeding Heart	SR	S2	G4
M: rock outcrops				
Dichanthelium erectifolium (= Panicum erectifolium)	Erectleaf Witchgrass	SR	S1	G4
C: savannas				
Didiplis diandra (= Peplis diandra)	Water Purslane	SR	S1	G5
CS: sluggish streams and ponds				
Dionaea muscipula	Venus Flytrap, Meadow Clams	SR	S3	G3
CS: savannas, seepage bogs, pocosin edges				
Disporum maculatum	Nodding Mandarin	C	S2	G3G4
M: drier cove forests and northern hardwoods forests, ridgetops				
Draba ramosissima	Branching Draba	SR	S2	G4
MP: calcareous and mafic rock outcrops				
Draba reptans	Creeping Draba	SR	SH	G5
P: habitat not known				
Drosera filiformis	Threadleaf Sundew	SR	S2	G5
C: clay-based Carolina bays, wet savannas, ditches				
Echinacea laevigata	Smooth Coneflower	E C2	S1	G2?
P: glades, woodlands, and open areas over mafic rocks				

Echinacea purpurea MP: open woods and clearings	Purple Coneflower	SR		S1	G4G5
Echinodorus parvulus (not in RAB) C: drawdown zones of clay-based Carolina bays and blackwater rivers	Dwarf Burhead	C		S1	G2G4
Eleocharis cellulosa C: limesink ponds, interdune ponds, brackish marshes	Gulfcoast Spikerush	SR		S1	G4G5
Eleocharis equisetoides C: limesink ponds	Horsetail Spikerush	C		S1	G4
Eleocharis halophila C: brackish and freshwater marshes	Salt Spikerush	T		S1	G4
Eleocharis melanocarpa C: clay-based Carolina bays, limesink ponds	Blackfruit Spikerush	C		S1?	G4
Eleocharis robbinsii C: limesink ponds, clay-based Carolina bays, peat-burn lakes	Robbins's Spikerush	C		S1	G4G5
Eleocharis rostellata C: brackish marshes, limesink ponds	Beaked Spikerush	SR		S1	G5
Elymus trachycaulus ssp. trachycaulus (= Agropyron t.) M: olivine barrens	Slender Wheatgrass	C		S1	G5T5
Enemion biternatum (= Isopyrum biternatum) PC: rich bottomlands, levees, and lower slopes	Atlantic Isopyrum	SR		S2	G5
Epilobium ciliatum M: seeps and bogs	Purpleleaf Willowherb	SR		S2	G5
Epilobium leptophyllum M: bogs and seeps	Narrowleaf Willowherb	C		S2	G5
Eriocaulon aquaticum (= Eriocaulon pellucidum) CS: blackwater creeks, natural lakes, tidal freshwater marshes	Seven-angled Pipewort	SR		S2	G5
Eriocaulon lineare M: bogs	Linear Pipewort	E		SH	G4
Eriocaulon parkeri (not in RAB) C: natural lakes	Parker's Pipewort	C	3C	S1	G3
Erythrina herbacea C: maritime forests	Coralbean	SR		S1	G5
Eulophia (see Pteroglossaspis)					
Eupatorium incarnatum PMC: rich woods and thin woodlands over diabase, calcareous rocks, or rich alluvium	Pink Thoroughwort	SR		S1	G5
Eupatorium leptophyllum (= E. capillifolium var. l.) C: limesink ponds	Limesink Dog-fennel	SR		S1	G4G5
Eupatorium resinosum S: seepage bogs, beaver ponds, pondshores, shrub swamps	Resinous Boneset	E	C2	S1	G2
Euphorbia commutata (not in NC in RAB) MP: thin soil around mafic or calcareous outcrops	Cliff Spurge	SR		S1	G5
Euphorbia purpurea M: forests, especially over mafic rock	Glade Spurge	C	C2	S2	G2
Euphorbia (also see Chamaesyce)					
Eustachys glauca (= Chloris glauca) C: salt marshes	Saltmarsh Fingergrass	SR		S1	G4
Filipendula rubra M: bogs, wet meadows	Queen-of-the-Prairie	C		S1	G4G5
Fimbristylis perpusilla (not in RAB) C: drawdown zones of blackwater rivers	Harper's Fringe Rush	T	C2	S1	G2
Fothergilla major MP: dry ridgetop or bluff forests	Large Fothergilla	C		S2	G3

<i>Gaillardia aestivalis</i> S: sandhills	Sandhills Gaillardia	C		S1	G5
<i>Galactia mollis</i> S: sandhills	Soft Milk-Pea	SR		S1	G4G5
<i>Gale</i> (see <i>Myrica</i>)					
<i>Gentiana autumnalis</i> CS: savannas, pinelands, sandhills	Pinebarren Gentian	SR		S2S3	G3
<i>Gentiana flavida</i> (= <i>Gentiana alba</i>) M: habitat not known	Yellow Gentian	SR		SH	G4
<i>Gentiana</i> (also see <i>Gentianopsis</i>)					
<i>Gentianopsis crinita</i> (= <i>Gentiana crinita</i>) M: glades, serpentine barrens, open sites over basic rocks	Fringed Gentian	E		S1	G4
<i>Geum aleppicum</i> M: bogs	Yellow Avens	C		S1	G5
<i>Geum geniculatum</i> M: high elevation forests, streambanks, seepage slopes	Bent Avens	T	C2	S1	G1
<i>Geum laciniatum</i> M: bogs	Rough Avens	SR		S1	G5
<i>Geum radiatum</i> M: high elevation rocky summits	Mountain Avens	E	E	S1	G1
<i>Gillenia</i> (see <i>Porteranthus</i>)					
<i>Glyceria laxa</i> (= <i>G. canadensis</i> var. <i>laxa</i>) M: seeps	Lax Mannagrass	SR		S1	G?Q
<i>Glyceria nubigena</i> M: high elevation seeps	Smoky Mountain Mannagrass	E-SC	C2	S2	G2
<i>Glyceria</i> (also see <i>Torreyochloa</i>)					
<i>Grammitis nimbat</i> M: spray zone behind waterfalls	Dwarf Polypody	E	C2	S1	GU
<i>Gymnocarpium</i> sp. 1 (not in RAB) M: shaded and sheltered crevices on high elevation rocky summits	Appalachian Oak Fern	C	C2	S1	G1G2
<i>Habenaria</i> (see <i>Coeloglossum</i> , <i>Platanthera</i>)					
<i>Halodule beaudettei</i> C: in shallow water in sounds and estuarine rivers	Beaudette's Shoalweed	SR		S1	G5
<i>Helenium brevifolium</i> PC: bogs, seeps, riverbanks, other wet sites	Littleleaf Sneezeweed	C		S1	G4
<i>Helenium pinnatifidum</i> CP: savannas and open, wet, mucky sites	Dissected Sneezeweed	SR		S2?	G3G5
<i>Helianthemum bicknellii</i> M: rock outcrops, glades, fens	Plains Sunrose	C		S1	G5
<i>Helianthemum georgianum</i> C: maritime forests	Georgia Sunrose	C		S1	G4
<i>Helianthemum propinquum</i> M: rock outcrops, glades	Creeping Sunrose	C		S1	G4
<i>Helianthemum rosmarinifolium</i> S: sandhills	Rosemary Sunrose	SR		S1	G4
<i>Helianthus glaucophyllus</i> M: cove forests and other middle-elevation forests and openings	Whiteleaf Sunflower	C	3C	S3	G3
<i>Helianthus laevigatus</i> P: shaly open woods and roadsides	Smooth Sunflower	SR		S2	G3G4

<i>Helianthus schweinitzii</i> P: open woods and roadsides	Schweinitz's Sunflower	E	C2	S1	G1
<i>Helonias bullata</i> M: bogs	Swamp Pink	T	T	S1	G2
<i>Hemicarpha</i> (see <i>Lipocarpha</i>)					
<i>Heteranthera multiflora</i> (not in RAB) C: open pools in brownwater or blackwater river floodplains	Multiflowered Mud-Plantain	SR		S1	GU
<i>Heuchera longiflora</i> (= <i>H. longiflora</i> var. <i>aceroides</i>) M: rich and rocky cove forests, especially over calcareous or mafic rocks	Long-Flower Alumroot	C		S2	G3
<i>Hexalectris spicata</i> PMC: dry or mesic woods on basic soils	Crested Coralroot	SR		S2	G3G4
<i>Hexastylis contracta</i> M: acidic forests under rhododendron	Mountain Heartleaf	E	C2	S1	G3
<i>Hexastylis lewisii</i> PSC: forests, pocosin edges	Lewis's Heartleaf	C	3C	S3	G3
<i>Hexastylis naniflora</i> P: rich deciduous forests, bluffs, and ravines	Dwarf-flowered Heartleaf	E	T	S2	G2G3
<i>Hexastylis rhombiformis</i> (not in RAB) M: cove forests	French Broad Heartleaf	C	C2	S1	G1
<i>Hierochloa odorata</i> (not in RAB) M: bogs	Holy Grass	C		S1	G5
<i>Houstonia montana</i> (not in RAB) M: high elevation rocky summits, grassy balds	Mountain Bluet	PE	E	S1	G5T1
<i>Hudsonia montana</i> M: gorge rim outcrops, rocky summits, pine-oak/heath ridges	Mountain Golden-heather	T	T	S1	G1
<i>Hudsonia tomentosa</i> C: openings in maritime forest, blowouts, dunes and medanos	Woolly Beach Heather	SR		S2	G5
<i>Huperzia porophila</i> (= <i>Lycopodium porophyllum</i>) M: in spray zone of waterfalls	Rock Clubmoss	C		S1	G4
<i>Huperzia selago</i> (= <i>Lycopodium selago</i>) M: high elevation rocky summits, seeps, fens	Fir Clubmoss	SR		S2	G5
<i>Hydrastis canadensis</i> MP: cove forests, other rich deciduous forests	Golden Seal	E-SC		S2	G4
<i>Hypericum adpressum</i> C: boggy places	Bog St. John's-wort	C		SH	G2G3
<i>Hypericum buckleyi</i> M: high elevation rocky summits, granitic domes, grassy balds	Blue Ridge St. John's-wort	SR		S2S3	G3?
<i>Hypericum suffruticosum</i> C: pine savannas	Pineland St. John's-wort	SR		S1	G?
<i>Hypoxis sessilis</i> CS: savannas, pinelands	Sessile Yellow Stargrass	C		S1	G4
<i>Ilex amelanchier</i> CS: blackwater swamps and riverbanks, clay-based Carolina bays	Sarvis Holly	C	3C	S2	G3
<i>Ilex collina</i> (not in RAB) M: bogs, wet streamsides or high elevation forests	Long-Stalked Holly	T	3C	S1	G3
<i>Isoetes piedmontana</i> (not in RAB) P: granite flatrocks and diabase glades	Piedmont Quillwort	T		S1	G4Q
<i>Isoetes riparia</i> C: tidal freshwater marshes and swamp forests	Riverbank Quillwort	SR		S1	G4
<i>Isoetes virginica</i> P: upland depression swamp forests, clayey soils	Virginia Quillwort	C	C2	S1	G1G2Q
<i>Isopyrum</i> (see <i>Enemion</i>)					

Isotria medeoloides	Small Whorled Pogonia	E	E	S1	G2
MPS: forests, especially with white pine					
Iva microcephala (not in NC in RAB)	Small-Headed Marsh Elder	C		S1	G5
C: clay-based Carolina bays					
Jeffersonia diphylla	Twin Leaf	SR		S1	G5
M: rich cove forests, especially over calcareous rocks					
Juglans cinerea	Butternut	W	C2	S2S3?	G5?
MP: cove forests, rich woods					
Juncus gymnocarpus	Naked-Fruit Rush	C		S2	G2G3
M: bogs, seeps, streambanks					
Juncus trifidus var. carolinianus (= J. t. var. monanthos)	Carolina One-Flowered Rush	E	C2	S1	G5T3Q
M: high elevation rocky summits					
Juniperus communis var. depressa	Dwarf Juniper	C		S1	G5T5
MP: high elevation granitic domes, low elevation rocky summits					
Kalmia cuneata	White Wicky	E-SC	C2	S2	G3
CS: pocosins					
Lachnocaulon beyrichianum	Southern Bog-Button	C		S1	G2G3
C: sandhills, sandhill/pocosin ecotones					
Lechea torreyi	Torrey's Pinweed	C		S1	G4G5
CS: sandhills, savannas					
Liatris aspera	Rough Blazing Star	SR		S1	G4G5
M: glades, open woods, fens					
Liatris helleri	Heller's Blazing Star	T	T	S1	G1
M: high elevation rocky summits, cliffs					
Liatris squarrulosa (= Liatris earlei)	Earle's Blazing Star	SR		S2	G4G5
PS: diabase glades, open woods especially over mafic rocks; also sandhills					
Liatris turgida	Shale-barren Blazing Star	SR		S1?	G?
M: dry rocky woods					
Lilaeopsis carolinensis	Carolina Lilaeopsis	T	3C	S2	G3
C: freshwater marshes, pools, tidal marshes					
Lilium canadense ssp. canadense	Yellow Canada Lily	SR		S1	G5T?
M: bogs, wet meadows					
Lilium canadense ssp. editorum	Red Canada Lily	SR		S1	G5T?
M: bogs, wet meadows					
Lilium grayi	Gray's Lily	T-SC	C2	S2	G2
M: bogs, wet meadows, seeps, grassy balds, high elevation forests					
Lilium philadelphicum	Wood Lily	SR		S1	G5
M: grassy balds, glades					
Limosella australis (= L. subulata)	Awl-leaf Mudwort	C		S1	G4G5
C: tidal marshes					
Lindera melissifolia (= L. melissaefolia)	Southern Spicebush	E	E	S1	G2
C: wet areas					
Lindera subcoriacea (not in RAB)	Bog Spicebush	E	C2	S1	G2
S: streamhead pocosins, white cedar swamps					
Lindernia saxicola	Riverbank Pimpernel	W	3B	SH	G1Q
M: riverbank rock outcrops					
Linum floridanum var. chrysocarpum (not in RAB)	Yellow-fruited Flax	SR		S1	G7T?
C: pine savannas					
Linum sulcatum var. sulcatum	Glade Flax	SR		SH	G5T?
P: diabase glades					
Liparis loeselii	Fen Orchid	SR		S1	G5
MC: seeps, bay swamps					
Lipocarpa micrantha (= Hemicarpha micrantha)	Small-flowered Hemicarpha	SR		S1	G4
C: drawdown zones of blackwater rivers					

<i>Listera australis</i> CM: moist hardwood forests, swamps, wet woods under rhododendron	Southern Twayblade	SR		S2	G4
<i>Listera cordata</i> M: habitat not known	Heart-leaved Twayblade	SR		SH	G5
<i>Lithospermum canescens</i> P: diabase glades, open woods over diabase	Hoary Puccoon	SR		S1	G5
<i>Litsea aestivalis</i> C: limesink ponds, other pools	Pondspice	SR	C2	S2	G4G5
<i>Lobelia boykinii</i> C: clay-based Carolina bays, wet pine savannas	Boykin's Lobelia	C	C2	S1	G2
<i>Lonicera canadensis</i> M: bogs, moist woods	American Fly-honeysuckle	SR		S1	G5
<i>Lonicera flava</i> MP: thin soils around rock outcrops, mainly mafic	Yellow Honeysuckle	SR		S1	G5?
<i>Lophiola aurea</i> (= <i>Lophiola americana</i>) C: very wet, mucky habitats in pine savannas	Golden Crest	C		S1	G3G4
<i>Lotus purshianus</i> var. <i>helleri</i> (= <i>Lotus helleri</i>) P: thin woods over basic soils	Prairie Birdfoot-trefoil	SR	C2	S2	G4G5T3
<i>Ludwigia alata</i> C: interdune ponds, marshes	Winged Seedbox	SR		S2?	G3G4
<i>Ludwigia lanceolata</i> C: interdune ponds, open wet areas	Lanceleaf Seedbox	SR		SH	G?
<i>Ludwigia linifolia</i> C: limesink ponds	Flaxleaf Seedbox	SR		S1	G4
<i>Ludwigia suffruticosa</i> CS: limesink ponds, clay-based Carolina bays	Shrubby Seedbox	SR		S2	G5
<i>Lycopodiella inundata</i> (not in RAB) M: bogs and seeps	Bog Clubmoss	SR		S1	G5
<i>Lycopodium</i> (see <i>Huperzia</i> , <i>Lycopodiella</i>)					
<i>Lycopus cokeri</i> SC: streamhead pocosins, sandhill seeps, clay-based Carolina bays, savannas	Coker's Bugleweed	C		S2	G2Q
<i>Lysimachia asperulifolia</i> (= <i>L. asperulaefolia</i>) CS: pocosin/savanna ecotones, pocosins	Rough-leaf Loosestrife	E	E	S2	G2
<i>Lysimachia fraseri</i> M: forests, roadsides	Fraser's Loosestrife	E	C2	S1	G2
<i>Macbridea caroliniana</i> C: blackwater swamps, savanna/pocosin ecotones	Carolina Bogmint	C	C2	S1	G2G3
<i>Magnolia macrophylla</i> P: rich deciduous forests	Bigleaf Magnolia	SR		S1S2	G5
<i>Malaxis spicata</i> C: maritime swamp forests, calcareous but mucky outer coastal plain swamps	Florida Adder's Mouth	SR		S1	G3G4
<i>Marshallia grandiflora</i> MP: bogs, other sites?	Large-fl. Barbara's Buttons	C	C2	SH	G2
<i>Marshallia trinervia</i> M: habitat not known	Broadleaf Barbara's Buttons	SR		SH	G3
<i>Matelea decipiens</i> P: thin woodlands over diabase	Glade Milkvine	SR		S2	G5
<i>Matelea flavidula</i> P: habitat not known	Yellow Carolina Milkvine	SR		S1?	G?
<i>Meehania cordata</i> M: cove forests, boulderfields	Meehania	SR		S2	G5
<i>Melanthium woodii</i> (not in RAB) M: habitat not known	Ozark Bunchflower	C		SR	

Melica nitens	Three-flowered Melic	SR		S1	G5
M: open calcareous woods					
Menyanthes trifoliata (not in RAB)	Buckbean	T		S1	G5
M: bogs					
Milium effusum	Millet-grass	C		SH	G5
M: high elevation forests or openings					
Minuartia alabamensis (not in RAB)	Alabama Sandwort	W	C2	S1	G2Q
P: granite flatrocks					
Minuartia godfreyi (= Arenaria godfreyi)	Godfrey's Sandwort	E	C2	SH	G1
C: marl outcrops?					
Minuartia groenlandica (= Arenaria glabra var. groenl.)	Greenland Sandwort	C		S2	G5
MP: high elevation and low elevation rocky summits					
Minuartia uniflora (= Arenaria uniflora)	Single-flowered Sandwort	E		S1	G3G4
P: granite flatrocks					
Monotropsis odorata (including var. lehmaniae)	Sweet Pinesap	C		S2	G3
PM: dry forests and bluffs					
Muhlenbergia glomerata	Bristly Muhly	C		S1	G5
M: olivine barrens, fens, mafic cliffs					
Muhlenbergia torreyana (not in RAB)	Torrey's Muhly	E	3C	S1	G3
C: clay-based Carolina bays					
Myrica gale (= Gale palustris)	Sweet Gale	C		S1	G5
M: bogs					
Myriophyllum laxum	Loose Watermilfoil	T	C2	S1	G2G3
C: limesink ponds, waters of natural lakes					
Myriophyllum tenellum (not in RAB)	Leafless Watermilfoil	C		S1	G5
C: waters of natural lakes					
Narthecium americanum	Bog Asphodel	E	C1	SX	G2
M: bogs					
Nestronia umbellula	Nestronia	T	C2	S3	G3G4
PSC: upland forests					
Oenothera perennis	Perennial Sundrops	SR		S1	G5
MC: bogs					
Oldenlandia boscii (not in NC in RAB)	Bosc's Bluet	SR		S1	G5
C: clay-based Carolina bays					
Onosmodium virginianum	Virginia Marbleseed	SR		S2?	G4
S: sandhills					
Orbexilum lupinellum (= Psoralea lupinellus)	Lupine Scurfpea	SR		S2	G7
S: sandhills					
Orbexilum macrophyllum (= Psoralea macrophylla)	Bigleaf Scurfpea	E	C1*	SX	GX
M: low mountain forests or outcrops? (habitat not known)					
Orbexilum onobrychis (= Psoralea onobrychis)	Lanceleaf Scurfpea	C		SX?	G5
M: habitat not known					
Oxypolis canbyi (not in RAB)	Canby's Cowbane	E	E	S1	G1G2
C: clay-based Carolina bays					
Oxypolis ternata	Savanna Cowbane	C	C2	S2	G3?
CS: pine savannas, sandhill seeps					
Pachysandra procumbens	Allegheny Spurge	SR		S1	G4G5
P: cove forests					
Panax quinquefolius (= P. quinquefolium)	Ginseng	SR-SC		S4	G4
MPC: cove forests, other rich forests					
Panax trifolius (= P. trifolium)	Dwarf Ginseng	SR		S2	G5
MP: cove forests, northern hardwoods, other rich forests					
Panicum flexile	Wiry Panic Grass	SR		S1	G3G5
PM: glades and openings over mafic rocks					

<i>Panicum tenerum</i> CS: wet savannas, sandhill seeps Panicum (also see <i>Dichanthelium</i>)	Southeastern Panic Grass	C		S1	G4
<i>Parnassia caroliniana</i> C: wet savannas	Carolina Grass-of-Parnassus	E	C2	S2	G2
<i>Parnassia grandifolia</i> MC: fens and seeps over calcareous or mafic rocks	Large-lvd. Grass-of-Parnassus	C		S2	G2G3
<i>Parthenium integrifolium</i> var. <i>auriculatum</i> PM: glades and openings over mafic rocks	Glade Wild Quinine	C		S1	G5T?
<i>Parthenium integrifolium</i> var. <i>mabryanum</i> (not in RAB) SPC: savannas, pocosin edges, upland pine-oak woods	Mabry's Wild Quinine	SR		S2	G5T2?
<i>Parthenium radfordii</i> (not in RAB) SC: clay soils in sandhills	Wavyleaf Wild Quinine	C	C2	S1	G1G2
<i>Paspalum bifidum</i> SC: sandhills and savannas	Pitchfork Crown Grass	SR		S1	G5
<i>Pedicularis lanceolata</i> M: bottomlands, swampy woods	Swamp Lousewort	SR		S1	G5
<i>Pellaea wrightiana</i> P: rock outcrops	Wright's Cliff-brake	E		S1	G5
<i>Peltandra sagittifolia</i> (= <i>P. sagittaeifolia</i>) C: pocosins, other wet, peaty sites Peplis (see <i>Didiplis</i>)	Spoonflower	SR		S2	G3G4
<i>Phacelia ranunculacea</i> PC: bottomlands, rich lower slopes	Buttercup Phacelia	C		S2	G4
<i>Phaseolus sinuatus</i> SC: sandhills	Sandhills Bean	C		S1	G2G4
<i>Phegopteris connectilis</i> (= <i>Thelypteris phegopteris</i>) M: spray zone of waterfalls and spruce-fir forests	Northern Beech Fern	C		S1	G5
<i>Phlox subulata</i> M: outcrops and glades, especially over mafic rocks	Moss Pink	SR		S1	G5
<i>Pinguicula pumila</i> C: savannas	Small Butterwort	C		S1	G4
<i>Plantago cordata</i> P: beds of small, slate-bottomed, perennial streams	Heart-leaf Plantain	E	3C	S1	G3
<i>Plantago sparsiflora</i> C: wet savannas	Pineland Plantain	E	C2	S1	G2
<i>Platanthera integra</i> (= <i>Habenaria integra</i>) C: savannas	Yellow Fringeless Orchid	T		S1	G5
<i>Platanthera integrilabia</i> (= <i>Habenaria bleph.</i> var. <i>i.</i>) M: bogs	White Fringeless Orchid	E	C2	SX	G2
<i>Platanthera nivea</i> (= <i>Habenaria nivea</i>) C: wet savannas	Snowy Orchid	SR		S2	G5
<i>Platanthera peramoena</i> (= <i>Habenaria peramoena</i>) MP: bogs, forests	Purple Fringeless Orchid	C		S1	G5
<i>Poa paludigena</i> (not in RAB) M: bogs	Bog Bluegrass	C	C2	S1	G2
<i>Poa palustris</i> M: spruce-fir forests, grassy balds	Swamp Bluegrass	SR		S1	G5
<i>Poa saltuensis</i> (= <i>Poa languida</i>) M: olivine barrens	A Bluegrass	C		S1	G5?
<i>Polygala grandiflora</i> S: sandhills	Showy Milkwort	SR		S1?	G5?

<i>Polygala hookeri</i> C: savannas	Hooker's Milkwort	C		S1?	G3G4
<i>Polygonella articulata</i> C: sandhills	Coast Jointweed	C		SH	G5
<i>Polygonum glaucum</i> C: ocean and sound beaches	Seabeach Buckwheat	C		S1	G3
<i>Ponthieva racemosa</i> C: blackwater forests and swamps, especially over marl	Shadow-witch	SR		S1	G4G5
<i>Porteranthus stipulatus</i> (= <i>Gillenia stipulata</i>) P: forests and open woods, mainly over mafic rocks	Indian Physic	SR		S2	G5
<i>Portulaca smallii</i> P: granite flatrocks and diabase glades	Small's Portulaca	E		S2	G3
<i>Potamogeton confervoides</i> SC: beaverponds and old millponds on blackwater creeks	Conferva Pondweed	C	C2	S1	G5
<i>Prenanthes roanensis</i> M: grassy balds, high elevation forests and outcrops	Roan Rattlesnakeroot	SR		S3	G3
<i>Psilocarya scirpoides</i> C: wet savannas	Long-beak Bald-sedge	C		S1	G4
<i>Psoralea</i> (see <i>Orbexilum</i> , <i>Pedimelum</i>)					
<i>Pteroglossaspis ecristata</i> (= <i>Eulophia ecristata</i>) C: pinelands	Eulophia	E	C2	SX	G3G4
<i>Ptilimnium costatum</i> C: tidal swamps or marshes	Ribbed Bishop's-weed	SR		SH	G5
<i>Ptilimnium nodosum</i> (including <i>Ptilimnium fluviatile</i>) P: rocky riverbeds	Harperella	E	E	S1	G2
<i>Pyrola elliptica</i> M: moist forests	A Shinleaf	C		S1	G5
<i>Pyxidanthra barbulata</i> var. <i>brevifolia</i> S: sandhills	Sandhills Pyxie-moss	E	3B	S2	G3T2Q
<i>Ranunculus ambigens</i> CP: open wet areas	Water-plantain Spearwort	SR		SH	G4G5
<i>Ranunculus flabellaris</i> C: pools in blackwater swamps	Yellow Water-crowfoot	SR		S1	G5
<i>Ranunculus hederaceus</i> C: marshes	Ivy Buttercup	C		S1	G5
<i>Rhexia aristosa</i> C: clay-based Carolina bays	Awned Meadow-beauty	T	C2	S2	G2
<i>Rhexia cubensis</i> C: limesink ponds	West Indies Meadow-beauty	SR		S1	G7
<i>Rhododendron cumberlandense</i> (not in RAB) M: grassy balds	Cumberland Azalea	SR		S1	G2Q
<i>Rhododendron prinophyllum</i> (= <i>Rhododendron roseum</i>) M: high elevation forests	Election Pink	SR		S1	G5
<i>Rhododendron vaseyi</i> M: wet swampy places, high elevation rocky areas, openings, or forests	Pink-shell Azalea	SR		S3	G3
<i>Rhus michauxii</i> SCP: sandhills, sandy forests	Michaux's Sumac	E-SC	E	S1	G1
<i>Rhynchospora alba</i> MCS: fens, bogs, pocosin openings, limesink ponds	White Beakrush	C		S2	G5
<i>Rhynchospora breviseta</i> S: savannas	Shortbristled Beakrush	SR		S1	G3G4
<i>Rhynchospora decurrens</i> C: swamp forests	Swamp Forest Beakrush	C	C2	S1	G27

Rhynchospora odorata C: maritime wet grasslands	Fragrant Beakrush	SR		S1	G5
Rhynchospora oligantha C: savannas	Feather-bristle Beakrush	C		S1	G5
Rhynchospora pallida CS: savannas and sandhill seeps	Pale Beakrush	C		S2S3	G2G3
Rhynchospora pleiantha C: limesink ponds	Coastal Beakrush	SR		S1	G3G5
Rhynchospora stenophylla C: savannas	Littleleaf Beakrush	C		S1	G2
Rhynchospora tracyi C: clay-based Carolina bays, limesink ponds	Tracy's Beakrush	SR		S2	G4
Robinia hispida var. fertilis (not in RAB) M: acidic cove forests, northern hardwoods forests, high elevation granitic domes	Fruitful Locust	C		S1	G5T2
Robinia hispida var. kelseyi (= Robinia kelseyi) M: high elevation red oak forests, dry rocky woods	Kelsey's Locust	C		S1	G5TUQ
Robinia viscosa var. hartwegii (= Robinia hartwigii) M: high elevation granitic domes	Hartweg's Locust	C		S1?	G3T1
Rubus idaeus ssp. sachalinensis (=R. i. var. canadensis) M: high elevation spruce-fir forests and openings	Red Raspberry	SR		S2?	G5T5
Rudbeckia heliopsidis C: moist pine flatwoods and woodland borders	Sun-facing Coneflower	T	C2	S1	G2
Rudbeckia triloba var. pinnatiloba (not in RAB) M: mafic cliffs	Pinnate-lobed Black-eyed Susan	SR	C2	S1	G4T1T2
Ruellia humilis P: diabase glades	Low Wild-petunia	C		S1	G5
Ruellia purshiana P: diabase glades and woodlands, mostly over mafic or calcareous rocks	Pursh's Wild-petunia	SR		S1S2	G?
Ruellia strepens (not in NC in RAB) C: low woods over marl	A Wild-petunia	SR		S1	G4G5
Sabatia kennedyana (= S. dodecandra var. kennedyana) C: drawdown zones on banks of blackwater rivers	Plymouth Gentian	T		S1	G3
Sageretia minutiflora (not in NC in RAB) C: shell middens	Small-flowered Buckthorn	C		S1	G4
Sagittaria fasciculata M: bogs and mountain swamp forests	Bunched Arrowhead	E	E	S1	G1
Sagittaria stagnorum (= S. subulata var. gracillima) C: blackwater streams, rivers, and lakes	Water Arrowhead	SR		S1	G4G5
Salvia azurea SC: sandhills	Azure Sage	SR		S1	G4G5
Sanguisorba canadensis M: bogs	Canada Burnet	SR		S2	G5
Sarracenia jonesii (not in RAB) M: bogs	Mountain Sweet Pitcher Plant	E-SC	E	S1	G1Q
Sarracenia oreophila (not in RAB) M: bogs	Green Pitcher Plant	E-SC	E	S1	G2
Saxifraga careyana M: seepy rockfaces	Carey's Saxifrage	W	3C	S3	G3
Saxifraga caroliniana M: high to middle elevation moist cliffs and rock outcrops	Carolina Saxifrage	C	C2	S2	G2
Saxifraga pensylvanica M: bogs	Swamp Saxifrage	C		S1	G5
Schisandra glabra C: rich slopes and floodplain "islands"	Magnolia Vine	T-SC		S1	G4

<i>Schwalbea americana</i> SC: savannas and moist pinelands with frequent fire	Chaffseed	E	C1	S1	G2
<i>Scirpus acutus</i> C: natural lakes	Hardstem Bulrush	SR		SH	G5
<i>Scirpus cespitosus</i> M: high elevation rocky summits, moist cliffs	Deerhair Bulrush	C		S2	G5
<i>Scirpus etuberculatus</i> C: blackwater creeks	Canby's Bulrush	SR		S1S2	G3G4
<i>Scirpus flaccidifolius</i> (not in RAB) C: swamp forests	Reclining Bulrush	C	C2	S1	G1G2G
<i>Scirpus lineatus</i> (including <i>S. fontinalis</i>) PC: low rich woods	Lined Bulrush	C		S1	G4
<i>Scirpus subterminalis</i> S: blackwater creeks	Swaying Bulrush	SR		S1	G4G5
<i>Scleria georgiana</i> C: savannas	Georgia Nutrush	C		S1	G4
<i>Scleria verticillata</i> C: savannas	Savanna Nutrush	C		S1	G5
<i>Scutellaria australis</i> (not in RAB) P: alluvial forests	Southern Skullcap	SR		SH	G?
<i>Scutellaria leonardii</i> (not in RAB) P: diabase glades	Shale-barren Skullcap	SR		S1	G3G5G
<i>Scutellaria nervosa</i> P: alluvial forests	Veined Skullcap	SR		S1	G5
<i>Scutellaria saxatilis</i> M: northern hardwoods forests	Rock Skullcap	C	C2	S1	G4
<i>Sedum pusillum</i> P: granite flatrocks	Puck's Orpine	E	C2	S1	G3
<i>Sedum rosea</i> (var. <i>roanensis</i>) M: high elevation rocky summits	Roseroot, King's Crown	E	3B	S1	G5
<i>Senecio millefolium</i> M: granitic domes, other outcrops	Divided-leaf Ragwort	T	C2	S2	G2?
<i>Senecio pauperculus</i> PM: fens, bogs, and diabase glades	Balsam Groundsel	SR		S2?	G5
<i>Senecio plattensis</i> (not in RAB) M: mafic and calcareous rock outcrops and cliffs	A Groundsel	C		S1	G5
<i>Senecio schweinitzianus</i> (= <i>S. robbinsii</i>) M: grassy balds	Schweinitz's Groundsel	E		S1	G5?
<i>Senecio</i> (also see <i>Cacalia</i>)					
<i>Seymeria pectinata</i> C: disturbed habitats	Sticky Afzelia	SR		SH	G4G5
<i>Shortia galacifolia</i> M: streambanks, slopes, and outcrops in humid gorges	Oconee Bells	E-SC	C2	S2	G2
<i>Sida inflexa</i> (not in RAB) C: habitat not known	Fernald's Fan-petal	W	C2*	SH?	GH
<i>Sideroxylon tenax</i> (= <i>Bumelia tenax</i> ; not in NC in RAB) C: maritime forests and scrub	Tough Bumelia	C		S1	G3?
<i>Silene ovata</i> M: rich slopes, cove forests	Mountain Catchfly	C	C2	S2	G3
<i>Silphium terebinthinaceum</i> P: diabase glades, other open or semi-open sites over mafic rock	Prairie Dock	C		S2	G4G5
<i>Sisyrinchium dichotomum</i> (not in RAB) M: thin woods, especially over amphibolite, in the escarpment region	Reflexed Blue-eyed Grass	E	C2	S1	G1

<i>Smilax biltmoreana</i> (= <i>S. ecirrhata</i> var. <i>biltmoreana</i>)	Biltmore Carrion-flower	C		S2	G2G3
PM: dry to mesic forests, over felsic or mafic rocks					
<i>Smilax lasioneura</i> (not in RAB)	A Carrion-flower	SR		S1	
M: oak-hickory forests over mafic rocks					
<i>Solidago plumosa</i> (not in RAB)	Yadkin River Goldenrod	C	C2	SX	GX
P: riverside rocks					
<i>Solidago porteri</i> (not in RAB)	Porter's Goldenrod	W	C2*	SR	GHQ
M: high elevation granitic domes					
<i>Solidago ptarmicoides</i> (not in RAB)	Prairie Goldenrod	C		S1	G5
P: diabase glades					
<i>Solidago pulchra</i> (not in RAB)	Carolina Goldenrod	C	C2	S1	G1Q
C: savannas					
<i>Solidago spithamea</i>	Blue Ridge Goldenrod	E	T	S1	G1
M: high elevation rocky summits					
<i>Solidago uliginosa</i>	Bog Goldenrod	SR		SU	G4G5
M: bogs, seeps					
<i>Solidago verna</i>	Spring-flowering Goldenrod	E	C2	S2	G2?
CS: dry pinelands					
<i>Solidago</i> (also see <i>Chrysoma</i>)					
<i>Sparganium angustifolium</i> (= <i>S. chlorocarpum</i>)	Greenfruit Bur-reed	SR		SH	G5
M: pondshores					
<i>Spartina pectinata</i>	Freshwater Cordgrass	SR		S1	G5
MC: freshwater marshes, spray zones of waterfalls					
<i>Spiraea virginiana</i>	Virginia Spiraea	E	PT	S1	G1
M: riverbanks					
<i>Spiranthes laciniata</i>	Lace-lip Ladies'-tresses	C		S1	G4G5
C: moist wet habitats					
<i>Spiranthes longilabris</i>	Giant Spiral Orchid	C		S1	G3
C: savannas					
<i>Spiranthes ochroleuca</i> (not in RAB)	Yellow Ladies'-tresses	SR		S1	G4
M: grassy balds, meadows, wooded slopes					
<i>Sporobolus heterolepis</i>	Prairie Dropseed	E		S1	G5
M: olivine barrens					
<i>Sporobolus teretifolius</i>	Wireleaf Dropseed	T	C2	S2	G2?
C: wet savannas					
<i>Stachys clingmanii</i>	Clingman's Hedge-nettle	SR		S1	G3Q
M: spruce-fir forests, northern hardwoods forests					
<i>Stachys eplingii</i> (not in RAB)	Epling's Hedge-nettle	SR		S1	G5
M: bogs					
<i>Stellaria alsine</i>	Longstalk Starwort	SR		S1	G5
M: seeps					
<i>Stellaria corei</i>	Core's Starwort	SR		S3	G3
M: coves, seeps, northern hardwoods forest					
<i>Streptopus amplexifolius</i>	White Mandarin	C		S1	G5
M: spruce-fir forests, northern hardwoods forests					
<i>Stylisma pickeringii</i> var. <i>pickeringii</i> (= <i>Bonamia</i> p.)	Pickering's Dawnflower	E	C2	S1	G4?T1?
SC: sandhills					
<i>Synandra hispidula</i>	Synandra	C	3C	SH	G3
M: rich cove forests					
<i>Syngonanthus flavidulus</i>	Yellow Hatpins	SR		S1?	G5
C: savannas					
<i>Taxus canadensis</i> (not in RAB)	Canada Yew	SR		S1	G5
M: bogs, swamp forests under spruce					

<i>Thalictrum cooley</i>	Cooley's Meadowrue	E	E	S1	G1
C: wet savannas					
<i>Thaspium pinnatifidum</i>	Mountain Thaspium	SR		S1	G3G4
M: calcareous slopes					
<i>Thelypteris simulata</i> (not in RAB)	Bog Fern	T		S1	G5
M: bogs					
<i>Thelypteris</i> (also see <i>Phegopteris</i>)					
<i>Thermopsis mollis</i> var. <i>fraxinifolia</i> (= <i>T. fraxinifolia</i>)	Ash-leaved Golden-banner	C		S2?	G3G4?
MP: dry ridges					
<i>Thermopsis mollis</i> var. <i>mollis</i> (= <i>T. mollis</i>)	Appalachian Golden-banner	SR		S2?	G3G4?
PM: dry ridges					
<i>Tofieldia glabra</i>	Carolina Asphodel	C	C2	S2S3	G2G3
CS: savannas, moist sandhill/pocosin ecotones					
<i>Tofieldia glutinosa</i> (= <i>T. racemosa</i> var. <i>glutinosa</i>)	Sticky Bog Asphodel	C		S1	G5
MP: bogs					
<i>Torreyochloa pallida</i> (= <i>Glyceria pallida</i>)	Pale Mannagrass	SR		S1	G5?
C: blackwater pools and old millponds					
<i>Trichomanes boschianum</i>	Appalachian Filmy-fern	T		S1	G4
M: spray zone of waterfalls, seeps over rock					
<i>Trichomanes petersii</i>	Dwarf Filmy-fern	T		S1	G3
M: moist rocks in humid gorges					
<i>Trichostema brachiatum</i> (not in RAB)	Glade Bluecurls	SR		S1	G4G5
PM: diabase glades, other dry calcareous or mafic outcrops					
<i>Trichostema</i> sp. 1 (not in RAB)	Bald Head Bluecurls	C	C2	S2	G2
C: dunes, openings in maritime forest and scrub					
<i>Tridens carolinianus</i>	Carolina Triodia	C		S1	G2G3
S: sandhills and pine flatwoods					
<i>Tridens strictus</i>	Spike Triodia	SR		SH	G5
C: pine flatwoods					
<i>Trientalis borealis</i> (not in RAB)	Starflower	C		S1	G5
M: coves					
<i>Trillium discolor</i>	Mottled Trillium	T		S1	G2
M: rich coves in the Savannah River drainage					
<i>Trillium flexipes</i> (not in RAB)	Bent White Trillium	C		SH	G5
M: rich coves					
<i>Trillium pusillum</i> var. 1 (not in RAB)	Alabama Least Trillium	E	C2	S1	G3T3
M: rich cove forests					
<i>Trillium pusillum</i> var. <i>pusillum</i>	Carolina Least Trillium	E	C2	S1	G3T1
CP: ecotones between savannas and nonriverine wet hardwood forests, over marl					
<i>Trillium pusillum</i> var. <i>virginianum</i> (not in RAB)	Virginia Least Trillium	E	C2	S1	G3T2
C: mesic hardwood forests					
<i>Trillium recurvatum</i> (not in RAB)	Prairie Trillium	SR		S1	G5
M: rich coves					
<i>Trillium sessile</i> (not in RAB)	Sessile-flowered Trillium	SR		S1	G4G5
C: rich alluvial levees and slopes					
<i>Trillium simile</i> (not in RAB)	Sweet White Trillium	SR		S1	G?
M: rich coves					
<i>Trisetum spicatum</i>	Soft Trisetum	E		SX	G5T4?
M: grassy balds and/or high elevation rocky summits					
<i>Uniola</i> (see <i>Chasmanthium</i>)					
<i>Urtica chamidryoides</i> (= <i>U. chamaedryoides</i>)	Stinging Nettle	SR		S1	G4G5
C: rich alluvial levees					

Utricularia geminiscapa (not in RAB) C: seepage zone on Suffolk Scarp	Two-flowered Bladderwort	SR		S1	G4G5
Utricularia minor (not in RAB) M: bogs	Small Bladderwort	C		S1	G5
Utricularia olivacea C: limesink ponds	Dwarf Bladderwort	T		S2	G4
Utricularia resupinata (not in RAB) C: natural lakes (blackwater)	Northeastern Bladderwort	SR		S1	G4?
Vaccinium hirsutum M: ridgetop red oak forests	Hairy Blueberry	C		S1S2	G3?
Vaccinium macrocarpon MC: bogs, seeps, pocosins	Cranberry	C		S2	G4
Veratrum (see Melanthium)					
Verbena riparia P: habitat not known	Riverbank Vervain	C	C2	S1	G1?
Verbesina walteri (not in RAB) M: rich cove forests	Walter's Crownbeard	C		S1	G3G4
Veronica americana M: seeps, bogs	American Speedwell	SR		S2	G5
Warea cuneifolia S: sandhills	Carolina Warea	C		SH	G4
Woodsia ilvensis M: cliffs, rock outcrops	Rusty Woodsia	SR		S1	G5
Woodsia scopulina M: cliffs, rock outcrops	Allegheny Cliff Fern	SR		S1	G5
Xyris brevifolia C: savannas, other low wet areas	Short-leaved Yellow-eyed Grass	SR		S1	G4G5
Xyris elliotii C: low wet areas	Elliott's Yellow-eyed Grass	SR		SH	G4
Xyris flabelliformis C: savannas	Savanna Yellow-eyed Grass	C		S1	G4
Yucca gloriosa C: dunes	Moundlily Yucca	SR		S2?	G?
Zigadenus elegans ssp. glaucus (= Z. glaucus) M: calcareous rock outcrops	White Camas	C		S1	G5TU

MOSSES

Barbula inaequalifolia	A Moss	C		S1	G2?
M: on thin soil over shale					
Bartramidula cernua	Dwarf Apple Moss	SR		S1	G3?
M: in spray zones of waterfalls, moist rocks in humid gorges					
Brachydontium trichodes	Peak Moss	C		S1	G2?
M: on moist rocks in spruce-fir forests					
Brachymenium andersonii	Anderson's Brachymenium	C	C1*	SH	G1
M: on humus in acidic cove forests (mixed hardwood-hemlock)					
Brachymenium systylium	Mexican Brachymenium	C		S1	G5
M: on humus in acidic cove forests (mixed hardwood-hemlock)					
Brachythecium populeum	Matted Feather Moss	SR		SH	G5
M: mountain forests					
Brachythecium rotaeanum	Rota's Feather Moss	SR		S1	G3?
M: on bark or rock in cove forests					

Bryocrumia vivicolor (= B. andersonii)	Gorge Moss	E	C2	SH	G1
M: rocks and streambanks in humid gorges, spray zones of waterfalls					
Bryoxiphium norvegicum	Sword Moss	SR		S1	G3?
M: rocks in humid gorges, spray zones of waterfalls					
Bryum riparium	A Moss	C		SH	G?
M: spray zones of waterfalls					
Buxbaumia aphylla	Bug-on-a-stick	SR		SH	G2
M: forests, roadside banks					
Buxbaumia minakatae	Hump-backed Elves	C		SH	G2
M: on rotten logs and stumps in mountain forests					
Campylium stellatum	Yellow Starry Fen Moss	SR		S1	G5
M: fens					
Campylopus atrovirens	Cliff Campylopus	SR		S1	G3?
M: cliffs, high elevation rocky summits					
Campylopus carolinae	Savanna Campylopus	C	C2	S1	G1
C: savannas					
Campylopus oerstedianus	Oersted's Campylopus	C		S1	G1G3
P: granite flatrocks					
Campylopus paradoxus	Paradoxical Campylopus	C		S1	G3
M: high elevation rock outcrops					
Cirriphyllum piliiferum	A Moss	SR		S1	G5
M: moist rocks, wet by seepage or waterfall spray					
Dichodontium pellucidum	A Moss	SR		S2	G?
M: seepage or spray zones of waterfalls on mafic or calcareous rocks					
Dicranum undulatum	Bog Broom-moss	SR		S1	G5
M: bogs, seeps					
Ditrichum ambiguum	Ambiguous Ditrichum	C		S1	G3?
M: acidic cove forests					
Drepanocladus fluitans	Floating Sickle-moss	SR		S1	G5
M: in spray zones of waterfalls					
Encalypta procera	Extinguisher Moss	SR		S1	G4G5
M: on moist calcareous rocks					
Entodon compressus	Flattened Entodon	C		S1	G3G4
MP: on moist calcareous rocks					
Entodon concinnus	Lime Entodon	C		S1	G5
M: on moist calcareous rocks					
Entodon sullivantii	Sullivant's Entodon	SR		S2	G3G4
M: on rocks or bark in humid gorges and cove forests					
Eucladium verticillatum	Lime-seep Eucladium	SR		S1	G5
M: on moist calcareous rocks					
Eurhynchium pringlei	Pringle's Eurhynchium	SR	C2	S1	G1G2G
M: rocks and streambanks in humid gorges, spray zones of waterfalls					
Fissidens exilis	Small Pocket Moss	SR		S1	G2G4
P: streambanks					
Fissidens hallii	Hall's Pocket Moss	C		S1	G2
C: on bark in cypress-gum swamps					
Grimmia cribrosa	Copper Grimmia	C		S1	G3G5
M: high elevation rocky summits					
Homalia trichomanoides	Lime Homalia	C		S1	G5
M: in spray zones of waterfalls, on rocks in humid gorges					
Homaliadelphus sharpii	Sharp's Homaliadelphus	C		S1	G2G3
M: on dry mafic or calcareous rocks in gorges					
Hygrohypnum closteri	Closter's Brook-hypnum	SR		S1	G3
MP: on rocks submersed in streams					

Leptodontium excelsum	Grandfather Mtn. Leptodontium	C		S1	G2?
M: on bark of Fraser Firs and Red Spruces in spruce-fir forests					
Leptodontium flexifolium	Pale-margined Leptodontium	SR		S1	G5
M: high elevation rocky summits and moist calcareous rocks					
Leptohymenium sharpii (= Pterigynandrum sharpii)	Mount Leconte Moss	C	C2	S1	G1G2
M: moist rocks in spruce-fir forests					
Lindbergia brachyptera	Lindberg's Maple-moss	SR		S1	G5
M: bark of hardwoods					
Macrocoma sullivantii	Sullivant's Maned-moss	SR		S2	G3G5
MP: bark of cedar or hardwoods					
Mnium carolinianum	Carolina Mnium	C	C2	S2	G2G3
M: rocks and streambanks in humid gorges					
Orthodontium pellucens	Translucent Orthodontium	C		S1	G3?
MP: moist felsic or calcareous rocks					
Orthotrichum keeverae	Keever's Bristle-moss	E	C2	S1	G1
P: on trees around low elevation granitic domes					
Orthotrichum obtusifolium	Blunt Bristle-moss	SR		S1	G5
M: bark of hardwoods					
Palamocladium leskeoides	Palamocladium	C		S1	G3G5
M: calcareous rocks in humid gorges					
Platydictya confervoides	Alga-like Matted-moss	SR		S1	G4G5
M: calcareous rocks					
Pterigynandrum (see Leptohymenium)					
Rhabdoweisia crenulata	Himalayan Ribbed-weissia	C		S1	G3G4
M: moist rocks in cove forests in humid gorges					
Rhytidium rugosum	Golden Glade-moss	SR		S2	G5
M: high elevation rocky summits, grassy balds, glades, over mafic rocks					
Schlotheimia lancifolia	Highlands Moss	T	C2	S1	G2
M: on bark of hardwoods in cove forests					
Scopelophila cataractae	Agoyan Cataract Moss	C		S1	G3G4
MP: copper-rich soils					
Scopelophila ligulata	Copper Moss	SR		S1	G5?
M: copper-rich soils and rock-faces (granite, limestone, mica schist)					
Sphagnum angustifolium	Narrowleaf Peatmoss	SR		S1	G5T4
M: bogs					
Sphagnum capillifolium	Northern Peatmoss	SR		S1	G5
M: bogs					
Sphagnum fallax	Pretty Peatmoss	SR		S1	G5T4
M: bogs					
Sphagnum fitzgeraldii	Fitzgerald's Peatmoss	C		S2	G2
C: pocosins and savannas					
Sphagnum flexuosum	Flexuous Peatmoss	SR		S1	G5
M: bogs					
Sphagnum pylaesii	Simple Peatmoss	C		S1	G5
M: seepage cliffs, natural pools					
Sphagnum rubellum	Red Peatmoss	SR		S1	G5T5
M: bogs					
Sphagnum russowii	Russow's Peatmoss	SR		S1	G5
M: bogs					
Sphagnum squarrosum	Squarrose Peatmoss	C		S1	G5
M: spray zones of waterfalls, seepage in spruce-fir forests					
Sphagnum subsecundum var. subsecundum	Orange Peatmoss	C		S1	G5T4
M: bogs and fens					

<i>Sphagnum tenellum</i>	Delicate Peatmoss	C		S1	G5
M: high elevation granitic domes					
<i>Sphagnum torreyanum</i>	Giant Peatmoss	C		S1	G5
S: beaver ponds and old mill ponds on blackwater creeks					
<i>Sphagnum warnstorffii</i>	Fen Peatmoss	C		S1	G5
M: bogs and fens					
<i>Splachnum pennsylvanicum</i>	Southern Dung Moss	C		SH	G2?
M: bogs					
<i>Syrrhopodon incompletus</i>	Cuban Schliessmund	C		S1	G5
C: on treetrunks in maritime forests					
<i>Taxiphyllum alternans</i>	Japanese Yew-moss	C		S1	G3?
M: on limestone in spray zones of waterfalls					
<i>Tortella flavovirens</i>	Beach Moss	SR		S1	G3G5
C: dune swales					
<i>Tortula ammonsiana</i>	Ammons's Tortula	C	C2	S1	G1
M: shaded rock faces, probably with nutrient-rich seepage					
<i>Tortula fragilis</i>	Fragile Tortula	SR		S1	G5
M: shaded rock faces, probably with nutrient-rich seepage					
<i>Tortula papillosa</i>	Papillose Tortula	SR		S1	G5
PM: bark of hardwoods					
<i>Tortula propagulosa</i>	Budding Tortula	C		S1S2	G1G2
PM: bark of hardwoods					

LIVERWORTS AND HORNWORTS

<i>Anastrophyllum saxicola</i>	A Liverwort	C		S1	G3G4
M: high elevation rocky summits					
<i>Bazzania nudicaulis</i>	A Liverwort	SR	C2	S2S3	G2G3
M: on bark of Fraser Fir or on shaded rock in spruce-fir forests					
<i>Cephaloziella hampeana</i>	A Liverwort	SR		S1	G5
M: fens					
<i>Cephaloziella obtusilobula</i>	A Liverwort	C	C2	S1	G1
M: high elevation cliffs or other moist rocks					
<i>Cephaloziella spinicaulis</i>	A Liverwort	C		S1	G3G4
M: on high elevation rocky summits					
<i>Cheilolejeunea evansii</i>	A Liverwort	C	C2	SH	GH?
M: on bark of hardwoods in humid gorges					
<i>Cylindrocolea andersonii</i>	A Liverwort	C	C1*	SH	GH?
C: banks of blackwater rivers					
<i>Cylindrocolea rhizantha</i>	A Liverwort	C		SH	G3?
C: on marl outcrops					
<i>Drepanolejeunea appalachiana</i>	A Liverwort	C		S1	G2?
M: on moist rock, rhododendron bark, and rhododendron leaves in humid gorges					
<i>Lejeunea blomquistii</i>	A Liverwort	C	C2	S1	G1
M: on dead tree bark or vertical rock faces in spray zone of waterfalls					
<i>Lejeunea dimorphophylla</i>	A Liverwort	C		S1	G3?
C: on bark in maritime forests					
<i>Lejeunea glaucescens</i> var. <i>acrogyna</i>	A Liverwort	C		SH	G5TH
C: on shaded rock at the piedmont/coastal plain fall line					
<i>Lophocolea appalachiana</i>	A Liverwort	C	C2	S1	G1
M: on rock faces in spray zone of waterfalls					
<i>Lophozia barbata</i>	A Liverwort	SR		S1	G4G5
M: on high elevation rocky summits					

Lophozia excisa	A Liverwort	SR		S1	G5
M: on high elevation rocky summits					
Lophozia hatcheri	A Liverwort	C		S1	G5
M: on high elevation rocky summits					
Lophozia heterocolpa	A Liverwort	C		S1	G?
M:					
Mylia taylorii	A Liverwort	SR		S1	G5
M: moist rock outcrops at high elevations, spray zone of waterfalls					
Nardia scalaris	A Liverwort	C		S1	G5
M: on high elevation rocky summits and on moist rocks in spruce-fir forests					
Plagiochila austinii	A Liverwort	SR		S1S2	G3
M: moist rocks					
Plagiochila caduciloba	A Liverwort	C	C2	S1	G1
M: rocks and streambanks in humid gorges, spray zone of waterfalls					
Plagiochila columbiana	A Liverwort	C	C2	S1	G1
P: on thin soil over boulders on floodplains					
Plagiochila corniculata	A Liverwort	C		S2	G3?
M: on bark of Fraser Firs in spruce-fir forests, rarely on hardwoods					
Plagiochila echinata	A Liverwort	C	C2	S1	G1
M: rocks and streambanks in humid gorges, spray zone of waterfalls					
Plagiochila miradorensis	A Liverwort	SR		S1	G3G5
C: on bark in maritime forests and swamps					
Plagiochila sharpii	A Liverwort	C	C2	S2	G2
M: damp rockfaces in humid gorges, high elevation rocky summits					
Plagiochila sullivantii var. spinigera	A Liverwort	C	C2	S1	G2T1
M: on moist rocks in spray zones of waterfalls					
Plagiochila sullivantii var. sullivantii	A Liverwort	C	C2	S2	G2T2
M: on moist rocks (rarely bark), mostly in spray zones of waterfalls					
Plagiochila virginica var. caroliniana	A Liverwort	C	C2	S1	G3T1
M: rockfaces in spray zone of waterfalls, other moist rockfaces					
Plagiochila virginica var. euryphylla	A Liverwort	C	C2	S1	G3T1
M: rockfaces in spray zone of waterfalls					
Porella japonica ssp. appalachiana	A Liverwort	C	C2	S1	G5T1
M: on rocks in spray zones of waterfalls					
Porella wataugensis	A Liverwort	C		S1	G1
M: on rocks in humid gorges					
Radula voluta	A Liverwort	C		S1	G1G2
M: on moist rocks in spray zones of waterfalls					
Sphenolobopsis pearsonii	A Liverwort	C	C2	S2	G2
M: on bark of Fraser Firs in spruce-fir forests					

LICHENS

Cladonia psoromica	Bluff Mtn. Reindeer Lichen	C	C2	S1	G1
M: fens and glades over amphibolite rock					
Gymnoderma lineare	Rock Gnome Lichen	T	C2	S1	G1
M: high elevation rock outcrops, outcrops in humid gorges					
Hydrothyria venosa	An Aquatic Lichen	SR		S1	G?
MP: submersed in brooks and streams					
Teloschistes flavicans	A Lichen	SR		S1	G5?
C: on twigs in maritime forests					

NORTH CAROLINA PLANT WATCH LIST
Edition of 2 May 1990

compiled by Alan S. Weakley, Botanist
North Carolina Natural Heritage Program
Department of Environment, Health and Natural Resources

The North Carolina Plant Watch List includes plant species which are rare or otherwise threatened with serious decline, but which have not yet been placed on the Rare Plant List of North Carolina. Watch List species are additional indicators of significant habitats, and their presence should be considered in planning natural area protection efforts, though obviously with less weight than higher priority rare species and natural communities. The North Carolina Natural Heritage Program maintains paper files on these species, but does not include them in its map and computer files. Plants placed on this list fall into a number of categories, discussed below. The North Carolina Natural Heritage Program requests additional information about these species, in order to clarify their status and reclassify them into other appropriate and more specific categories.

Reasons for the current placement of rare species on the Watch List rather than at a higher rarity status (Endangered, Threatened, Candidate, or Significantly Rare) are variable. The taxonomic validity of some of these species is currently in doubt. For others, the Natural Heritage Program lacks adequate documentation of their historic or present occurrence in North Carolina. Others are known to be rare in North Carolina, but it appears that they are likely exotic to the state. For most species, however, their actual rarity is poorly known and we are requesting more data before such species receive a higher, and more formal, rarity status.

To indicate the reasons for each species' current placement, the following six Watch Categories have been devised. All species falling into the first five categories are listed below. Regionally Rare Plants (Watch Category 6) are presented in a separate list following. A list of Potential "New-to-North Carolina" species also follows.

Watch Category 1 (W1) includes species with inadequate information about their distribution and rarity in North Carolina. These are generally species which have not been previously listed as rare in North Carolina,

This list is dynamic, being revised frequently as further data become available. It will be revised at least once a year. If you are using a copy of this list which is more than a year old (check the edition date at the top of the first page), it is invalid and you should request a new version. Further information on these species may be obtained by contacting the North Carolina Natural Heritage Program, Department of Environment, Health and Natural Resources, P.O. Box 27687, Raleigh, NC 27611-7687 or the North Carolina Plant Conservation Program, Department of Agriculture, P.O. Box 27647, Raleigh, NC 27611-7647.

but which appear to be so, based on herbarium records and field experience of Natural Heritage Program staff, contractees, and cooperating scientists. Further information is needed in order to determine the true status of these species in North Carolina. We request locality and population data on these species. Examples: Bromus ciliatus, Magnolia macrophylla, Quercus austrina.

Watch Category 2 (W2) includes species which are not presently considered to be valid taxa. If further study reveals that these are valid taxa, they would warrant addition to the Rare Plant List as Endangered, Threatened, Candidate, or Significantly Rare. This category has been used sparingly, for named taxa which currently appear to have some significant chance of being proved valid. We request data on taxonomic validity, as well as data on localities and populations. Examples: Dioscorea hirticaulis, Lindernia saxicola, Minuartia alabamensis.

Watch Category 3 (W3) includes species which have been reported from North Carolina without adequate documentation. These species should be listed at a higher level, if their reported occurrence in North Carolina is true. This category includes sight records, old and vague reports for which no documentation has appeared, and, in a few cases, more recent literature reports for which we have not yet received documentation. We request data documenting native occurrence in North Carolina, as well as locality and population data. Examples: Agrimonia incisa, Gaultheria hispidula, Sporobolus asper.

Watch Category 4 (W4) includes species known to occur in North Carolina which current data seem to indicate are not native to North Carolina, but whose native occurrence is plausible. Some of these species were previously listed at a higher level, but field investigations suggest that all known North Carolina occurrences are introductions. We request data documenting the native occurrence of the species in North Carolina. Examples: Angelica atropurpurea, Chrysopsis pilosa, Hypericum frondosum.

Watch Category 5 (W5) includes species which have declined sharply in North Carolina, but which do not appear yet to warrant site-specific monitoring. Most species in this category have undergone declines of over 50 % (in many cases over 90 %) from their pre-Columbian status. Reasons for decline include exotic pests or pathogens, massive modification of the landscape, suppression of natural fires, failure of reproduction, and heavy exploitative use. Since many of these species were once abundant or even dominant in parts of North Carolina, they may still be fairly common or frequently encountered, despite the strong decline. If current trends continue, however, many of these species will be threatened with extirpation in all or a major part of their ranges in North Carolina. Examples: Abies fraseri, Castanea dentata, Juglans cinerea.

Watch Category 6 (W6) includes species which are rare in one region of North Carolina, while being uncommon to abundant within another region. These regional rarities, generally within-state disjuncts, are significant for protection of genetic variation and long-term viability of species. Species in Watch Category 6 are listed separately, by physiographic province, at the end of the main Watch List.

Scientific Name Province: Habitat	Common Name	N.C. Status	U.S. Status	N.C. Rank	Global Rank

VASCULAR PLANTS					
<i>Abies fraseri</i> M: spruce-fir forests	Fraser Fir	W5	C2	S2	G3
<i>Acer saccharum</i> var. <i>viride</i> (= <i>A. s. ssp. nigrum</i>) M: rich cove forests	Black Maple	W1		S1?	G5T?
<i>Acmella oppositifolia</i> (= <i>Spilanthes americana</i> var. <i>repens</i>) CP: low wet areas in alluvial forests	Creeping Spotflower	W1		S1	
<i>Aeschynomene indica</i> C: tidal marshes	Indian Jointvetch	W1		S2?	G5
<i>Agalinis fasciculata</i> C: savannas, limesink ponds	Clustered Gerardia	W1		S2	G5
<i>Agalinis tenella</i> C: savannas, flatwoods	A Gerardia	W1		S1	G3G5Q
<i>Agastache nepetoides</i> P: oak-hickory forests, especially over mafic rocks	Yellow Giant-hyssop	W1		S1	G5
<i>Agastache scrophulariifolia</i> (= <i>A. scrophulariaefolia</i>) M: rich cove forests, northern hardwoods forests	Purple Giant-hyssop	W1		S2S3	G4
<i>Amsonia ciliata</i> S: sandhills	Fringed Bluestar	W1		S2	G5?
<i>Andropogon glomeratus</i> var. <i>glaucoptis</i> (not in RAB) C: savannas	Chalky Broomsedge	W1		S2?	
<i>Andropogon tracyi</i> (not in RAB) S: sandhills	Tracy's Bluestem	W3		S1	G3G5
<i>Andropogon virginicus</i> var. <i>glaucus</i> (not in RAB) C: savannas	A Broomsedge	W1		S1?	
<i>Anemone minima</i> (not in RAB) M: forests, openings	A Thimbleweed	W3		SR	G3
<i>Angelica atropurpurea</i> M: roadsides	Purple-stem Angelica	W4		SE?	G5
<i>Anthraenantia rufa</i> C: savannas	Purple Silkyscale	W1		S2	G5
<i>Anthraenantia villosa</i> SC: moist pinelands	Green Silkyscale	W1		S2S3	G4G5
<i>Apium</i> (see <i>Ciclospermum</i>)					
<i>Arenaria lanuginosa</i> C: maritime grasslands and forests, other sandy sites	Spreading Sandwort	W1		S2?	G5
<i>Asclepias longifolia</i> CS: savannas, sandhill seeps	Longleaf Milkweed	W1		S2?	G4G5
<i>Asclepias purpurascens</i> PM: swamps, bottomlands	Purple Milkweed	W1		S1?	G4G5
<i>Asclepias tuberosa</i> ssp. <i>rolfsii</i> S: sandhills	Sandhills Butterflyweed	W1		S1?	G5T?
<i>Asplenium pinnatifidum</i> PM: acidic rock outcrops and cliffs	Lobed Spleenwort	W1		S1	G5
<i>Asplenium platyneuron</i> var. <i>bacculum-rubrum</i> (not in RAB) C: maritime forests	Maritime Spleenwort	W1		S1	

Asplenium resiliens MP: calcareous rock outcrops	Blackstem Spleenwort	W1	S2	G5
Asplenium X ebenoides (not in RAB) M: calcareous rock outcrops	Scott's Spleenwort	W3	SR	G?
Aster lanceolatus (= A. simplex) CP: bottomlands	White Panicle Aster	W1	S2?	
Aster puniceus var. firmus (not in RAB) [= A. lucidulus] M: moist places	Purple-stem Aster	W1	S1	
Aster spectabilis CP: pine barrens and woodland borders	Western Showy Aster	W1	S2?	G5
Astilbe crenatiloba (not in RAB) M: habitat not known	Roan False Goat's Beard	W3	C2	SR? GHQ
Athyrium filix-femina var. angustum M: rock outcrops and forests at high elevations	Northern Lady Fern	W3	SR	
Athyrium (also see Diplazium)				
Azolla caroliniana C: pools, ponds, sluggish rivers	Carolina Mosquito Fern	W1	S2	G5
Baccharis angustifolia C: brackish marshes, shrubby marsh edges	Saltwater False-willow	W1	S2?	G4
Bacopa caroliniana C: shallow ponds, marshes, and tidal creeks	Blue Water-hyssop	W1	S1	G4G5
Bacopa rotundifolia (not in RAB) C: natural lakes	Round-leaf Water-hyssop	W4	SH	G5
Baptisia alba (= B. alba & B. pendula) PSC: open woodlands, clearings	White Wild Indigo	W1	S2	G4
Baptisia leucophaea var. bracteata (= B. bracteata) P: open woodlands	Creamy Wild Indigo	W1	S1	
Bartonia paniculata SC: wet savannas, sandhill seeps, other open wet areas	Twining Screwstem	W1	S2	G5
Bartonia verna C: savannas, limesink ponds	White Screwstem	W1	S1S2	G5?
Boltonia asteroides CM: marshes, savannas, bogs	White Doll's-daisy	W1	S2?	G5
Boltonia diffusa (not in RAB) ?	Diffuse Doll's-daisy	W1	S1?	G4
Bonamia (see Stylisma)				
Bromus ciliatus M: high elevation moist woods and seeps	Fringed Brome	W1	S1	G5
Bromus latiglumis (not in RAB) M: river floodplains	Riverbank Brome	W1	S2?	G5
Bromus nottowanianus (not in RAB) ?	Nottoway Valley Brome	W1	S1?	G?
Buchnera americana (including B. floridana) MCPS: savannas, pine flatwoods, forests, streambanks	American Bluehearts	W1	S1S2?	G3?
Bumelia (see Sideroxylon)				
Burmussia biflora CS: savannas, sandhill seeps	Northern Bluethreads	W1	S2?	G4G5
Calamintha georgiana (= Satureja georgiana) SC: sandhills	Georgia Calamint	W1	S1	G5
Callitriche terrestris (= C. deflexa) CP: low wet places	Terrestrial Water-starwort	W1	S2?	G5

<i>Calopogon barbatus</i> C: savannas	Bearded Grass-pink	W1	S1S2	G5?
<i>Calycanthus floridus</i> var. <i>floridus</i> PM: mesic to dry forests	Eastern Sweetshrub	W1	S2?	G5T4T5
<i>Carduus</i> (see <i>Cirsium</i>)				
<i>Carex albursina</i> M: rich cove forests, over mafic or calcareous rocks	White Bear Sedge	W1	S1	G5
<i>Carex amphibola</i> var. <i>amphibola</i> CM: bottomlands and other rich woods	Eastern Narrowleaf Sedge	W1	S2	G5T4
<i>Carex bromoides</i> M: bogs, bottomlands	Brome Sedge	W1	S2?	G5
<i>Carex bullata</i> MPSC: bogs and other wet, peaty places	Button Sedge	W1	S2?	G5
<i>Carex crebriflora</i> MPC: rich cove forests, bottomlands	Coastal Plain Sedge	W1	S2?	G4?
<i>Carex echinata</i> ssp. <i>echinata</i> (= <i>C. muricata</i> var. <i>angustata</i>) M: bogs and seeps	Star Sedge	W1	S1S2	G5T5
<i>Carex elliotii</i> CS: boggy sites	Elliott's Sedge	W1	S1S2?	G3G4
<i>Carex emmonsii</i> CSP: dry woods	Emmons's Sedge	W1	S1	G5
<i>Carex floridana</i> (= <i>C. nigromarginata</i> var. <i>floridana</i>) CSP: dry sandy woods	Florida Sedge	W1	S1S2	G?
<i>Carex gracilescens</i> PM: rich woods	Slender Loose-flower Sedge	W1	S2?	G5?
<i>Carex granularis</i> PC: Piedmont bottomlands, coastal plain marl forests	Limestone Meadow Sedge	W1	S1?	G5
<i>Carex hyalinolepis</i> C: marshes	Shoreline Sedge	W1	S1?	G4G5
<i>Carex leavenworthii</i> PM: dry woods	Leavenworth's Sedge	W1	S1	G5
<i>Carex meadii</i> PM: low wet places	Mead's Sedge	W1	S1	G4G5
<i>Carex mitchelliana</i> (= <i>Carex crinita</i> var. <i>mitchelliana</i>) CSPM: low wet places	Mitchell's Sedge	W1	S2	G3G4
<i>Carex oklahomensis</i> (not in RAB) M: seeps	Oklahoma Sedge	W1	S1	G3?
<i>Carex oligocarpa</i> MC: rich woods, mostly over mafic or calcareous rocks	Rich-woods Sedge	W1	S1	G4
<i>Carex physorhyncha</i> CP: dry woods	Bellow's-beak Sedge	W1	S2?	G5
<i>Carex ruthii</i> (= <i>Carex muricata</i> var. <i>ruthii</i>) M: seeps and bogs	Ruth's Sedge	W1	S3	G3
<i>Carex sparganioides</i> MP: rich cove forests	Bur-reed Sedge	W1	S2?	G5
<i>Carex tenera</i> P: low woods	Quill Sedge	W1	S1?	G4G5
<i>Carex umbellata</i> MP: rock outcrops and rocky forests	Parasol Sedge	W1	S1S2?	G5
<i>Cassia</i> (see <i>Senna</i>)				
<i>Castanea dentata</i> MP: forests	American Chestnut	W5	S4	G4

<i>Caulophyllum giganteum</i> (not in RAB) M: cove forests	Northern Blue Cohosh	W1	S1	G3G5Q
<i>Celastrus scandens</i> MP: cove forests and rich woods	American Bittersweet	W1	S2?	G5
<i>Celtis occidentalis</i> (= <i>C. occidentalis</i> var. <i>occidentalis</i>) M: rocky places	Mountain Hackberry	W1	S1S2?	G5
<i>Ceratophyllum muricatum</i> (= <i>C. echinatum</i>) C: pools, lakes, and estuaries	Prickly Hornwort	W1	S2	G4G5
<i>Chamaesyce bombensis</i> (= <i>Euphorbia ammannioides</i>) C: seabeaches	Southern Seabeach Sandmat	W1	S2?	G4G5
<i>Chasmanthium sessiliflorum</i> (= <i>Uniola sessilifolia</i>) CP: hardwood forests	Longleaf Spikegrass	W1	S2	G5
<i>Chelone obliqua</i> CM: swamp forests, bogs, wet places	Red Turtlehead	W1	S2?	G4
<i>Chloris</i> (see <i>Eustachys</i>)				
<i>Chrysopogon pauciflorus</i> (not in RAB) C: sandhills	Goldenbeard	W4	S1	G4G5
<i>Chrysopsis scabrella</i> (not in RAB) S: sandhills	Rough Golden-aster	W	S1	G4
<i>Cinna latifolia</i> M: high elevation forests and openings	Slender Wood-reed	W1	S1S2	G5
<i>Cirsium lecontei</i> (= <i>Carduus lecontei</i>) C: savannas	Leconte's Thistle	W1	S2	G4G5
<i>Cirsium muticum</i> (= <i>Carduus muticus</i>) MPC: swamps, bogs, and wet places	Swamp Thistle	W1	S2S3	G5
<i>Cirsium virginianum</i> (= <i>Carduus virginianus</i>) C: savannas	Virginia Thistle	W1	S2S3	G3G4
<i>Cladrastis lutea</i> M: forests	Yellowwood	W1	S3	G4
<i>Coelorachis cylindrica</i> (= <i>Manisuris cylindrica</i>) P: roadsides and pondshores	Carolina Jointgrass	W4	S1	G4G5
<i>Coelorachis rugosa</i> (= <i>Manisuris rugosa</i>) CS: savannas, natural ponds	Wrinkled Jointgrass	W1	S2	G5
<i>Collinsonia serotina</i> (not in RAB) P: mixed deciduous forests	A Richweed	W1	S1?	G3G5
<i>Crataegus spathulata</i> CPM: bottomlands	Little-hip Hawthorn	W1	S1	G4G5
<i>Cuscuta cephalanthi</i> (= <i>C. cephalanthii</i>) MP: on woody hosts	Buttonbush Dodder	W1	S1	G5
<i>Cuscuta coryli</i> (= <i>C. corylii</i>) CP: on woody or herbaceous hosts	Hazel Dodder	W1	S1?	G5
<i>Cynanchum angustifolium</i> (= <i>C. palustre</i>) C: salt marshes, hammocks	Hammock Swallow-wort	W1	S1S2	G5
<i>Cyperus distans</i> C: marshes	A Flatsedge	W1	S1	G?
<i>Cyperus granitophilus</i> (not in RAB) P: granite flatrocks, other rock outcrops	Granite-loving Flatsedge	W1	S1?	G3Q
<i>Cyperus refractus</i> PMC: sandy woods and fields	Reflexed Flatsedge	W1	S2	G5
<i>Cyperus squarrosus</i> (= <i>C. aristatus</i>) P: granite flatrocks, other rock outcrops	Awed Flatsedge	W1	S2	G?
<i>Cyperus</i> (also see <i>Kyllinga</i>)				

<i>Cystopteris tenuis</i> (not in RAB) M: high elevation rocky summits, cliffs	Upland Bladder Fern	W1	S1	G4G5
<i>Dalea pinnata</i> (= <i>Petalostemum pinnatum</i>) SC: sandhills and dryish pinelands	Summer Farewell	W1	S2?	G5
<i>Desmodium fernaldii</i> CS: open woodlands	Fernald's Tick-trefoil	W1	S2?	G3G5
<i>Desmodium pauciflorum</i> PC: open woodlands	Few-flower Tick-trefoil	W1	S2?	G5
<i>Diamorpha smallii</i> (= <i>Sedum smallii</i>) PM: granite flatrocks	Elf Orpine	W1	S3	G3G4
<i>Dichanthelium boreale</i> (= <i>Panicum bicknellii</i>) P: open woods	Northern Witch Grass	W1	S1S2	G5
<i>Dichanthelium latifolium</i> (= <i>Panicum latifolium</i>) M: forests	Broadleaf Witch Grass	W1	S2	G5
<i>Dichanthelium ovale</i> var. <i>ovale</i> (= <i>Panicum ovale</i>) C: sandy woodlands	Eggleaf Witch Grass	W1	S1	G5T?
<i>Dichanthelium spretum</i> (= <i>Panicum spretum</i>) CPM: wet sites	Eaton's Witch Grass	W1	S1S2	G5
<i>Dichanthelium wrightianum</i> (= <i>Panicum wrightianum</i>) CS: savannas, pools	Wright's Witch Grass	W1	S1?	G4
<i>Dioscorea hirticaulis</i> (= <i>D. villosa</i> var. <i>hirticaulis</i>) SC: moist forests	Hairy Yam	W2	S2?	G2G3Q
<i>Diplazium pycnocarpon</i> (= <i>Athyrium pycnocarpon</i>) MPC: rich woods, usually over seepage	Glade Fern	W1	S2	G5
<i>Dirca palustris</i> PM: rich woods, either alluvial or over mafic or calcareous rocks	Leatherwood	W1	S2	G4
<i>Dodecatheon meadia</i> PM: rich, rocky woods, over mafic or calcareous rocks	Shooting Star	W1	S1	G5
<i>Dryopteris carthusiana</i> (= <i>Dryopteris spinulosa</i>) MC: swampy woods	Spinulose Woodfern	W1	S2	G5
<i>Dryopteris cristata</i> MCP: bogs, wet woods	Crested Woodfern	W1	S2S3	G5
<i>Dryopteris goldiana</i> MCP: moist woods	Goldie's Woodfern	W1	S1S2	G4
<i>Dryopteris ludoviciana</i> C: acid swamps in the southeastern Coastal Plain	Southern Woodfern	W1	S1S2	G5
<i>Echinacea pallida</i> PM: roadsides	Pale Coneflower	W4	SE?	G4G5
<i>Eleocharis atropurpurea</i> (not in RAB) C: clay-based Carolina bays	Purple Spikerush	W1	S1	G4G5
<i>Eleocharis elongata</i> (not in RAB) C: limesink ponds	Florida Spikerush	W3	S1	G5?
<i>Eleocharis engelmannii</i> P: marshes	Engelmann's Spikerush	W1	S1	G5
<i>Eleocharis erythropoda</i> MC: stream banks and marshes	Bald Spikerush	W1	S1	G5
<i>Eleocharis parvula</i> C: brackish and fresh marshes	Little-spike Spikerush	W1	S1?	G5
<i>Eleocharis smallii</i> (not in RAB) M: open wet places	Small's Spikerush	W3	S1	G5?
<i>Eleocharis tricostata</i> C: bogs and savannas	Three-angle Spikerush	W1	S1?	G3G4
<i>Eleocharis vivipara</i> C: bogs and pools	Viviparous Spikerush	W1	S1?	G5

<i>Elodea canadensis</i> CPM: streams	Canada Elodea	W1	S1?	G5
<i>Elodea nuttallii</i> CM: lakes, ponds, and streams	Nuttall's Elodea	W1	S2?	G5
<i>Elymus canadensis</i> M: rich woods	Nodding Wild Rye	W1	S1	G5
<i>Elymus riparius</i> M: riverbanks and low rich woods	Riverbank Wild Rye	W1	S1S2	G5
<i>Epilobium angustifolium</i> M: meadows and disturbed sites at high elevations	Purple Willowherb	W1	S1S2	G5
<i>Equisetum X ferrissii</i> ?	Ferriss's Scouring Rush	W3	SR	G?
<i>Eragrostis frankii</i> P: open disturbed sites	Frank's Lovegrass	W1	S1	G5
<i>Eragrostis lugens</i> P: open wet areas	Mourning Lovegrass	W1	S1	G5
<i>Erigenia bulbosa</i> MP?: rich woods	Harbinger-of-Spring	W3	SR	G5
<i>Eriophorum virginicum</i> MSC: peaty sites (bogs, fens, pocosins, seeps)	Tawny Cottongrass	W1	S2S3	G5
<i>Erythronium americanum</i> ssp. <i>americanum</i> (= <i>E. a. pro parte</i>) P: rich slopes	American Trout Lily	W1	S1	G5T5
<i>Eupatorium altissimum</i> P: woods and openings over mafic rocks	Tall Thoroughwort	W1	S1S2	G5
<i>Euphorbia</i> (also see <i>Chamaesyce</i>)				
<i>Eustachys petraea</i> (= <i>Chloris petraea</i>) C: dunes and sand flats, especially swales	Dune Fingergrass	W1	S2	G5
<i>Euthamia graminifolia</i> (= <i>Solidago graminifolia</i>) M: sandy bottomlands	Flattop Goldenrod	W4	S1	G5
<i>Fimbristylis miliacea</i> PMSC: open wet places	Grass-like Fimbr	W1	S1	G5
<i>Fragaria vesca</i> M: rich forests	Woodland Strawberry	W4	S1	G5
<i>Frasera caroliniensis</i> (= <i>Swertia caroliniensis</i>) M: deciduous forests	Columbo	W1	S1S2	G5
<i>Froelichia gracilis</i> PM: open disturbed sites	Slender Snake-cotton	W1	S2?	G5
<i>Galium asprellum</i> M: bogs	Rough Bedstraw	W1	S2	G5
<i>Galium lanceolatum</i> M: rich cove forests	Lanceleaf Wild Licorice	W1	S2	G5
<i>Gaultheria hispidula</i> M: habitat not known	Creeping Snowberry	W3	SR	G5
<i>Gelsemium rankinii</i> C: floodplains of blackwater rivers and streams	Swamp Jessamine	W1	S2	G5
<i>Glandularia canadensis</i> (= <i>Verbena canadensis</i>) CPS: sandhills and other dry woods	Rose Mock-vervain	W1	S1?	G5
<i>Glyceria obtusa</i> SC: bogs, seeps, other peaty places	Atlantic Mannagrass	W1	S2	G5
<i>Goodyera repens</i> M: moist acid forests, especially under rhododendrons and conifers	Dwarf Rattlesnake Orchid	W1	S2S3	G5
<i>Gratiola aurea</i> C: drawdown zones of blackwater rivers	Golden Hedge-hyssop	W1	S1	G5

<i>Gratiola ramosa</i> CS: savannas, boggy places, other open wet sites	Branched Hedge-hyssop	W1	S1	G4G5
<i>Habenaria repens</i> CS: in stagnant blackwater pools	Water-spider Orchid	W1	S2	G5
<i>Habenaria</i> (also see <i>Platanthera</i>)				
<i>Helenium vernale</i> C: savannas	Spring Sneezeweed	W	S1	G3G4
<i>Helianthemum carolinianum</i> CS: sandhills, pinelands, dry savannas	Carolina Sunrose	W1	S2?	G4
<i>Helianthemum corymbosum</i> C: maritime forests	Pinebarren Sunrose	W1	S1	G4G5
<i>Helianthus floridanus</i> C: savannas and pocosins	Florida Sunflower	W	S1	G?
<i>Helianthus heterophyllus</i> C: savannas and pocosins	Savanna Sunflower	W1	S2	G3G4
<i>Helianthus occidentalis</i> M: [habitat not known]	Few-leaf Sunflower	W1	S1	G5
<i>Heliotropium curassavicum</i> C: shores and edges of marshes	Seaside Heliotrope	W1	S1	G5
<i>Heteranthera reniformis</i> C: muddy shores, bars, and pools	Kidneyleaf Mud-plantain	W1	S2?	G5
<i>Heteropogon melanocarpus</i> C: pinelands	Tanglehead	W4	S1	G4?
<i>Heterotheca</i> (see <i>Chrysopsis</i>)				
<i>Heuchera americana</i> var. <i>hispida</i> (not in RAB) P: rich, rocky woods	Hispid Alumroot	W1	S1	G5T3?
<i>Heuchera caroliniana</i> P: rich, rocky woods	Carolina Alumroot	W1	S2S3	G3?
<i>Heuchera parviflora</i> MP: in deep shade under overhanging cliffs	Littleleaf Alumroot	W1	S2S3	G4
<i>Hibiscus aculeatus</i> C: savannas	Savanna Hibiscus	W1	S1	G4G5
<i>Hibiscus coccineus</i> (not in RAB) CP: blackwater swamps and open, wet ground	Scarlet Hibiscus	W4	S1	G4?
<i>Hottonia inflata</i> C: pools in black- or brown-water swamps, interdune ponds	Water Violet	W1	S3	G3G4
<i>Houstonia longifolia</i> var. <i>longifolia</i> MPSC: woodlands, dry outcrops	Longleaf Bluet	W1	S2	G4G5T?
<i>Houstonia purpurea</i> var. <i>calycosa</i> (not in RAB) ?	Summer Bluet	W1	S1	G5T5
<i>Humulus lupulus</i> var. <i>lupuloides</i> (not in RAB) ?	Hops	W4	S1	G5T?
<i>Humulus lupulus</i> var. <i>pubescens</i> (not in RAB) ?	Hops	W4	S1	G5T?
<i>Hybanthus concolor</i> MP: rich woods and cove forests, primarily over mafic or calcareous rocks	Green Violet	W1	S2S3	G5
<i>Hydrangea cinerea</i> (= <i>Hydrangea arborescens</i> ssp. <i>discolor</i>) M: shady ledges and cliffs	Ashy Hydrangea	W1	S1S2	G?
<i>Hydrophyllum macrophyllum</i> M: rich woods, especially rocky calcareous forests and cliffs	Largeleaf Waterleaf	W1	S1	G5
<i>Hymenocallis caroliniana</i> (= <i>H. occidentalis</i>) P: habitat not known	Carolina Spider-lily	W3	S1	G4

Hymenophyllum sp. 1	Filmy-fern Gametophyte	W1	S1S2	G?
M: moist grottoes				
Hypericum fasciculatum	Peelbark St. John's-wort	W1	S1?	G5
C: beaver ponds, low pinelands, pools				
Hypericum frondosum	Cedar-glade St. John's-wort	W3	SE	G4
M: bogs, high elevation granitic domes				
Hypericum graveolens	Mountain St. John's-wort	W1	S2S3	G3
M: high elevation balds, outcrops, seeps				
Hypericum mitchellianum	Blue Ridge St. John's-wort	W1	S2S3	G3
M: high elevation balds, outcrops, seeps				
Hypericum nitidum	A St. John's-wort	W1	S1	G?
C: low pinelands, pools				
Hypoxis juncea	Fringed Yellow Stargrass	W1	S1	G?
C: savannas				
Ilex ambigua (= I. ambigua var. ambigua)	Carolina Holly	W1	S2	G4G5
C: sandy woods				
Ilex cassine (= I. cassine var. cassine)	Dahoon	W1	S1	G5
C: blackwater swamps				
Ilex longipes (= I. decidua var. longipes)	Georgia Holly	W1	S1	G5
P: upland forests				
Ipomoea macrorhiza	Manroot	W1	S1	G3G5
C: low marshy places, dunes				
Ipomopsis rubra	Standing Cypress	W4	S1	G4G5
SC: sandy soils				
Iresine rhizomatosa	Rootstock Bloodleaf	W1	S2?	G5
C: low wet places, interdune swales, damp woods				
Iris prismatica	Slender Blue Iris	W1	S2?	G4G5
CM: bogs and marshes				
Juglans cinerea	Butternut	W5	C2	S2S3? G5?
MP: cove forests, rich woods				
Juncus abortivus	Pinebarren Rush	W1	S1S2	G4G5
CS: wet savannas				
Juncus articulatus	Jointleaf Rush	W1	S1	G5
C: wet open ground				
Juncus brachycarpus	Whiteroot Rush	W1	S2?	G4G5
PC: wet sandy soil				
Juncus brevicaudatus	Mountain Rush	W1	S1?	G5
M: bogs and seeps at high elevations				
Juncus longii	Long's Rush	W1	S1	G3G5G
CPM: wet clayey soil				
Juncus polycephalus	Many-head Rush	W1	S2?	G5
CS: sandy ponds, ditches				
Juncus secundus	Nodding Rush	W1	S1S2?	G5?
PM: rock outcrops				
Juncus torreyi	Torrey's Rush	W1	S1	G5
M: bogs				
Juncus trigonocarpus	Red-pod Rush	W1	S1S2?	G4G5
SC: seepage bogs				
Juncus validus	Round-pod Rush	W1	S1S2?	G5
C: wet open ground				
Juniperus virginiana var. silicicola (= J. silicicola)	Coastal Red-cedar	W1	S2?	G5T4T5
C: hammocks, shell middens, maritime scrub, brackish marshes				
Krigia biflora	Two-flower Cynthia	W1	S2?	G5
MP: rich mesic woods				

Krigia montana	Mountain Cynthia	W1	S3	G3	
M: cliffs, high elevation rocky summits, and grassy balds					
Kyllinga odorata (= Cyperus sesquiflorus)	Fragrant Flatsedge	W1	S2	G?	
C: savannas and marshes					
Lachnocaulon minus	Brown Bogbutton	W1	S2	G3G4	
CS: savannas, seeps					
Lathyrus japonicus var. glaber (not in RAB)	Beach Pea	W3	SR	G5T4T5	
C: beaches, shorelines					
Lathyrus palustris	Marsh Peavine	W1	S2?	G5	
C: bottomlands and streambanks					
Lathyrus pusillus	Tiny Peavine	W1	S1	G5?	
PC: wet, disturbed sites					
Lathyrus venosus	Smooth Peavine	W1	S2	G5	
PM: rich bottomlands and slopes					
Leersia lenticularis	Catchfly Cutgrass	W1	S1?	G5	
C: low woods					
Lemna gibba	Inflated Duckweed	W1	S1	G4G5	
C: ponds and sloughs					
Liatris microcephala	Small-head Blazing-star	W1	S1	G?	
M: rock outcrops, glades, dry woodlands (mostly over mafic rocks?)					
Liatris scariosa	New England Blazing-star	W1	S2	G5?	
MP: rock outcrops, glades, dry woodlands (mostly over mafic rocks?)					
Liatris secunda	A Blazing-star	W1	S1S2	G?	
SC: sandhills					
Lilium sp. 1 (not in RAB)	Blackwater Turk's-cap Lily	W1	S1	GU	
C: blackwater swamps and marshes					
Lilium sp. 2 (not in RAB)	Sandhills Wood Lily	W	S1	GU	
S: seepage bogs					
Lindernia monticola	Flatrock Pimpernel	W1	S2	G3?	
PM: seepages on granitic flatrocks and other rock outcrops					
Lindernia saxicola	Riverbank Pimpernel	W2	3B	SH	G1G
M: riverbank rock outcrops					
Ludwigia brevipes	Long Beach Seedbox	W1	S2?	G4G5	
CS: low wet places					
Ludwigia microcarpa	Tiny-fruited Seedbox	W1	S3	G3G4	
CP: savannas, ditches, marshes, open wet sites over calcareous, mafic, or alkaline substrate					
Ludwigia sphaerocarpa	Globe-fruit Seedbox	W1	S1	G5	
CS: bogs and pools					
Lupinus villosus	Lady Lupine	W1	S2?	G5	
C: sandhills and other dry, sandy woods					
Luziola fluitans (= Hydrochloa caroliniensis)	Southern Water Grass	W1	S1S2	G4G5	
C: pools, lakes, streams					
Luzula multiflora	Heath Woodrush	W1	S2?	G5	
MP: moist woods					
Lycopodium annotinum	Stiff Clubmoss	W3	SR	G5	
M: habitat in NC not known					
Lycopodium dendroideum (not in RAB)	A Clubmoss	W3	SR	G5	
M:					
Lycopodium hickeyi (not in RAB)	Hickey's Clubmoss	W1	SR	G?	
M: openings, balds, and high elevation forests					
Lycopus amplexans	Clasping Water-horehound	W1	S1	G5	
CS: wet places					
Lycopus angustifolius (= L. rubellus var. angustifolius)	Southern Bog Water-horehound	W1	S1	G?G	
C: bogs and marshes					

<i>Lygodium palmatum</i>	Climbing Fern	W1	S2	G4
MPSC: moist, wet, acidic places, open or forested				
<i>Lysimachia hybrida</i> (= <i>L. lanceolata</i> var. <i>hybrida</i>)	Lowland Loosestrife	W1	S1	G5
MPC: bottomlands				
<i>Lysimachia loomisii</i>	Carolina Loosestrife	W1	S3	G3
CS: pocosins and wet savannas				
<i>Lysimachia tonsa</i>	Southern Loosestrife	W1	S2?	G3?
P: upland forests				
<i>Lythrum alatum</i> (= <i>L. lanceolatum</i>)	Wing-angle Loosestrife	W1	S1	G5
C: marshes and low, wet places				
<i>Magnolia grandiflora</i>	Southern Magnolia	W1	S1	G5
C: mainland forests with maritime influence on the southeastern coast (introduced elsewhere)				
<i>Manfreda virginica</i> (= <i>Agave virginica</i>)	Eastern Agave	W1	S2	G5
PMCS: granite flatrocks, mafic glades, dry outcrops, dry woodlands				
<i>Manisuris</i> (see <i>Coelorachis</i>)				
<i>Matelea obliqua</i>	Climbing Milkvine	W1	S1	G4?
M: dry, rocky woodlands over calcareous rocks				
<i>Minuartia alabamensis</i> (not in RAB)	Alabama Sandwort	W2	C2	S1 G2Q
P: granite flatrocks				
<i>Monarda media</i> (not in RAB)	Purple Bee-balm	W1	S1?	G?
M: grassy balds				
<i>Muhlenbergia mexicana</i>	Mexican Muhly	W1	S1	G5
M: forests and openings				
<i>Muhlenbergia sobolifera</i>	A Muhly	W1	S1	G5
M: dripping cliffs and rocky slopes				
<i>Muhlenbergia sylvatica</i>	Woodland Muhly	W1	S1S2	G5
PM: rich alluvial forests				
<i>Myriophyllum pinnatum</i>	Cutleaf Water-milfoil	W	S2?	G5
CS: pools and ditches				
<i>Najas gracillima</i>	Slender Waternymph	W1	S2	G5
CPM: pools and lakes				
<i>Nelumbo lutea</i>	American Lotus	W1	S2	G5
CS: ponds, slow streams, natural lakes, estuarine rivers				
<i>Nuphar lutea</i> ssp. <i>sagittifolia</i> (= <i>N. luteum</i> ssp. <i>s.</i>)	Narrowleaf Cowlily	W1	S3	G5T3
CS: blackwater streams, rivers, and lakes				
<i>Nymphoides cordata</i>	Little Floatingheart	W1	S1	G5
S: blackwater streams and pools				
<i>Oplismenus setarius</i>	Shortleaf Basket Grass	W1	S1	G?
C: maritime forests, bottomlands				
<i>Orbexilum pedunculatum</i> var. <i>pedunculatum</i> (= <i>Psoralea</i>	Sampson's-snakeroot	W1	S1?	G?T?
M: open woodlands	<i>psoraloides</i> var. <i>eglandulosa</i>)			
<i>Panicum rigidulum</i> var. <i>combsii</i> (= <i>P. longifolium</i> var. <i>c.</i>)	Red-top Panic Grass	W1	S1	G5T?
C: marshes				
<i>Panicum</i> (also see <i>Dichanthelium</i> , <i>Phanopyrum</i>)				
<i>Parietaria floridana</i>	Florida Pellitory	W1	SU	G?
C: shell middens, disturbed sites, maritime forests				
<i>Parietaria pensylvanica</i>	Pennsylvania Pellitory	W1	S2	G5
PMC: slopes and bottomlands, usually over calcareous or mafic rocks				
<i>Parietaria praetermissa</i> (not in RAB)	Large-seed Pellitory	W1	SU	G?
C: shell middens, disturbed sites, maritime forests				
<i>Paronychia montana</i>	Mountain Nailwort	W3	SR	G4
M?: [habitat in NC not known]				

<i>Paspalum dissectum</i> CP: mudflats, other open wet areas	Mudbank Crown Grass	W1	S1	G3G4
<i>Paspalum fluitans</i> CP: seepage areas in swamp forests	Horsetail Crown Grass	W1	S1	G4G5
<i>Paspalum praecox</i> C: savannas	Early Crown Grass	W1	S2S3	G4
<i>Paspalum pubiflorum</i> MP: open areas	Hairy-seed Crown Grass	W1	S1?	G5
<i>Paspalum setaceum</i> var. <i>rigidifolium</i> ?	Slender Crown Grass	W3	SR	G5T?
<i>Paspalum vaginatum</i> CP: brackish marshes, low wet places	Seashore Crown Grass	W1	S1S2	G5Q
<i>Pedimelum canescens</i> (= <i>Psoralea canescens</i>) SC: sandhills	Buckroot	W1	S1S2	G2G4
<i>Penstemon smallii</i> M: rock outcrops and thin forests	Small's Beardtongue	W1	S3	G3G4
<i>Petalostemum</i> (see <i>Dalea</i>)				
<i>Phacelia maculata</i> P: granite flatrocks and creek bottomlands	Spotted Phacelia	W	S1	G?
<i>Phanopyrum gymnocarpum</i> (= <i>Panicum gymnocarpum</i>) C: low woods	Savanna Panic Grass	W1	S1?	
<i>Philadelphus hirsutus</i> MP: bluffs, cliffs, and rocky woods, mainly over mafic or calcareous rocks	Streambank Mock Orange	W1	S1S2	G5
<i>Philadelphus inodorus</i> MP: bluffs, cliffs, and rocky woods, mainly over mafic or calcareous rocks	Scentless Mock Orange	W1	S2	G4G5
<i>Phlox amplifolia</i> M: hardwood forests	Largeleaf Phlox	W1	S1S2	G3G5
<i>Phlox divaricata</i> ssp. <i>divaricata</i> M: rich deciduous forests	Wild Blue Phlox	W1	S2	G5T?
<i>Phlox divaricata</i> ssp. <i>laphamii</i> (not in RAB) C: rich levee and slope forests	Wild Blue Phlox	W1	S1	G5T?
<i>Pinguicula lutea</i> C: savannas	Yellow Butterwort	W1	S2	G4G5
<i>Pityopsis adenolepis</i> (= <i>Heterotheca adenolepis</i>) CS: sandhills	Carolina Silkgrass	W	S1	G?
<i>Platanthera flava</i> var. <i>herbiola</i> (not in RAB) M: bogs and moist forests	Northern Green Orchid	W1	S2?	G4T4
<i>Platanthera grandiflora</i> (= <i>Habenaria psycodes</i> var. <i>g.</i>) M: bogs, seeps, grassy balds, high elevation moist forests and banks	Large Purple-fringed Orchid	W1	S2	G5
<i>Pleea tenuifolia</i> C: pocosins, wet savannas	Rush-featherling	W1	S3	G4
<i>Polygala brevifolia</i> CS: savannas, seepages	Little-leaf Milkwort	W1	S2?	G4G5
<i>Polygala cruciata</i> var. <i>aquilonia</i> (not in RAB) MP: damp peat or sand	Mountain Drumheads	W1	S2?	G5T?
<i>Polygala senega</i> MP: woodlands and in thin soil around outcrops, usually over mafic or calcareous rocks	Seneca Snakeroot	W1	S2S3	G4G5
<i>Polygonella americana</i> (not in NC in RAB) S: sandhills	American Jointweed	W3	SR	G5
<i>Polygonum amphibium</i> (= <i>P. coccineum</i>) MPC: marshes	Water Smartweed	W1	S1	G5
<i>Polygonum erectum</i> MP: open places	Erect Knotweed	W1	S1S2	G5

<i>Polygonum hirsutum</i> CS: limesink ponds, drawdown zones of blackwater riverbanks	Hairy Smartweed	W1	S1	G4G5
<i>Polygonum scandens</i> var. <i>cristatum</i> PMC: moist forests, especially alluvial	Climbing Buckwheat	W1	S2?	G5T?
<i>Polygonum tenue</i> MP: glades and other thin soil over mafic rocks	Glade Knotweed	W1	S2?	G5
<i>Potamogeton natans</i> M: streams	Floating-leaf Pondweed	W1	S1	G5
<i>Prenanthes alba</i> M: hardwood forests	White Rattlesnakeroot	W1	S1?	G5
<i>Prenanthes</i> sp. 1 (= <i>P. alba</i> ssp. <i>pallida</i>) C: pocosins, pine flatwoods, wooded slopes	Pale Rattlesnakeroot	W	S1?	GU
<i>Prunus alabamensis</i> (= <i>P. serotina</i> var. <i>alabamensis</i>) C: sandy woodlands	Alabama Black Cherry	W1	S1	
<i>Prunus allegheniensis</i> (not in RAB) M: rocky forests	Allegheny Sloe	W1	S1	G3
<i>Prunus nigra</i> (= <i>P. americana</i> var. <i>lanata</i>) M: rich forests	Canada Plum	W1	S1	G4G5
<i>Prunus pumila</i> var. <i>susquehanae</i> M: rocky forests	Sand Cherry	W1	S1	G5T4T5
<i>Prunus umbellata</i> PSC: rocky or sandy woodlands	Hog Plum	W1	S2	G4G5
<i>Prunus virginiana</i> M: high elevation deciduous forests, mostly over mafic rocks	Choke-cherry	W1	S2	G5
<i>Psilocarya nitens</i> C: savannas	Shortbeak Baldsedge	W1	S2	G3
<i>Psoralea</i> (see <i>Orbexilum</i> , <i>Pedimelum</i>)				
<i>Ptelea trifoliata</i> MPC: rich woods, cliffs and rock exposures, mainly over mafic or calcareous rocks	Wafer-ash	W1	S2	G5
<i>Pycnanthemum setosum</i> C: pinelands	Awned Mountain-mint	W1	S2	G3G5
<i>Pycnanthemum virginianum</i> MP: forests	Virginia Mountain-mint	W1	S1	G5
<i>Pyrola americana</i> (= <i>P. rotundifolia</i> var. <i>americana</i>) MP: forests	American Shinleaf	W1	S2	G5
<i>Quercus austrina</i> C: bluff and bottomland forests	Bluff Oak	W1	S1S2	G5
<i>Quercus bicolor</i> P: upland swamp forests	Swamp White Oak	W1	S2	G5
<i>Quercus imbricaria</i> MP: floodplain forests	Shingle Oak	W1	S2	G5
<i>Quercus muehlenbergii</i> MP: calcareous forests and bluffs	Chinquapin Oak	W1	S2?	G5
<i>Quercus palustris</i> P: swamps	Pin Oak	W1	S1S2?	G5
<i>Ranunculus allegheniensis</i> M: rich cove forests	Allegheny Mountain Buttercup	W1	S2	G4G5
<i>Ranunculus fascicularis</i> ?	A Buttercup	W	SR	G5
<i>Ranunculus laxicaulis</i> (including <i>R. subcordatus</i>) C: swamp forests, open wet areas	Swamp Buttercup	W1	S1	G5?
<i>Ranunculus micranthus</i> P: rich woods	Rock Buttercup	W1	S1	G5?

<i>Ranunculus scleratus</i> C: marshes	Blister Buttercup	W1	S2?	G5
<i>Rhamnus caroliniana</i> PM: rich bottomlands and slopes	Carolina Buckthorn	W1	S2?	G5
<i>Rhynchospora elliotii</i> (= <i>R. schoenoides</i>) CS: savannas	Elliott's Beakrush	W1	S2S3?	G5
<i>Rhynchospora filifolia</i> CS: savannas, seepage bogs	Threadleaf Beakrush	W1	S2?	G5
<i>Rhynchospora harveyi</i> SCMP: seepage bogs, savannas, mountain bogs	Harvey's Beakrush	W1	S2?	G4
<i>Rhynchospora intermixta</i> CS: savannas, seepage bogs	Humble Beakrush	W1	S2	G7Q
<i>Rhynchospora inundata</i> SC: limesink ponds, clay-based Carolina bays	Narrowfruit Beakrush	W1	S1	G3G4
<i>Rhynchospora megalocarpa</i> CS: dry sandy sites	Sandy-field Beakrush	W1	S2?	G5
<i>Rhynchospora microcarpa</i> CP: swamp forests	Southern Beakrush	W1	S1	G5
<i>Rhynchospora miliacea</i> C: swamp forests, maritime swamp forests	Millet Beakrush	W1	S2?	G5
<i>Rhynchospora wrightiana</i> C: savannas	Wright's Beakrush	W1	S1	G5
<i>Robinia hispida</i> var. <i>rosea</i> (= <i>R. boyntonii</i>) M: open woods	Boynton's Locust	W1	S1?	G5T3
<i>Robinia viscosa</i> var. <i>viscosa</i> (= <i>R. viscosa</i>) M: open woods	Clammy Locust	W1	S3?	G3T3
<i>Rudbeckia laciniata</i> var. <i>humilis</i> (not in RAB) M: seeps and creekbanks at high elevations	A Coneflower	W1	S2?	G5T?
<i>Rudbeckia triloba</i> var. <i>rupestris</i> (not in RAB) M: forests at high elevations	A Coneflower	W1	S2?	G4T?
<i>Rumex altissimus</i> CPM: low wet places	Pale Dock	W1	S2?	G5
<i>Sabal palmetto</i> C: maritime forests on the southeastern coast	Cabbage Palm	W1	S1	G5
<i>Sabatia campestris</i> M: forest edges	Prairie Sabatia	W4	SH	G5?
<i>Sabatia quadrangula</i> PCS: sandhills, low woods, pocosin edges	Four-angle Sabatia	W1	S2	G?
<i>Sagittaria engelmanniana</i> SCP: mostly blackwater streams and bogs	Engelmann's Arrowhead	W1	S1?	G5?
<i>Sagittaria isoetiformis</i> (= <i>S. teres</i>) CS: limesink ponds, clay-based Carolina bays, natural lakes	Quillwort Arrowhead	W1	S2	G3G5
<i>Sagittaria kurziana</i> (not in RAB) C: blackwater streams	Spring-tape	W3	SR	G4
<i>Sagittaria platyphylla</i> (= <i>S. graminea</i> var. <i>platyphylla</i>) P: marshes	Delta Arrowhead	W1	S1	G5Q
<i>Sarracenia minor</i> C: savannas	Hooded Pitcher Plant	W1	S2	G4G5
<i>Sarracenia rubra</i> ssp. <i>rubra</i> CS: savannas, seepage bogs, pocosins	Sweet Pitcher Plant	W1	S3	G3T3
<i>Satureja</i> (see <i>Calamintha</i>)				
<i>Saxifraga careyana</i> M: seepy rockfaces	Carey's Saxifrage	W1	3C	S3 G3Q

<i>Scirpus divaricatus</i> C: swamp forests	Spreading Bulrush	W1	S2?	G5
<i>Scirpus georgianus</i> (not in RAB) PM: wet places, granite flatrocks	Georgia Bulrush	W1	S2?	G5
<i>Scirpus koilolepis</i> P: wet places	Keeled Beakrush	W1	S1	G5
<i>Scleria minor</i> CSM: bogs, savannas, seepage bogs	Slender Nutrush	W1	S2	G3
<i>Scleria reticularis</i> var. <i>reticularis</i> (not in RAB) CS: clay-based Carolina bays, limesink ponds	Netted Nutrush	W1	S1?	G5T?
<i>Sclerolepis uniflora</i> C: clay-based Carolina bays, blackwater river floodplains	One-flower Hardscale	W1	S2?	G4
<i>Scutellaria galericulata</i> (not in RAB) M: habitat not known	A Skullcap	W3	SH	G5
<i>Scutellaria ovata</i> ssp. <i>bracteata</i> (not in RAB) CP: rich woods	A Heartleaf Skullcap	W1	S1	G5T?
<i>Scutellaria ovata</i> ssp. <i>ovata</i> M: rich woods	A Heartleaf Skullcap	W1	S1	G5T?
<i>Scutellaria ovata</i> ssp. <i>rugosa</i> (not in RAB) PM: rich woods	A Heartleaf Skullcap	W1	S1	G5T?
<i>Scutellaria serrata</i> PM: deciduous forests	Showy Skullcap	W1	S2	G4G5
<i>Sedum glaucophyllum</i> (= <i>S. nevii</i>) PM: rock outcrops, mainly calcareous or mafic	Cliff Stonecrop	W1	S2	G3G4
<i>Sedum</i> (also see <i>Diamorpha</i>)				
<i>Selaginella tortipila</i> M: rock outcrops	Twisted-hair Spikemoss	W1	S3	G3
<i>Senecio glabellus</i> C: blackwater swamps	Butterweed	W1	S2?	G5
<i>Senecio obovatus</i> M: wooded slopes, mostly over mafic rocks	Roundleaf Ragwort	W1	S1?	G5
<i>Senna hebecarpa</i> (= <i>Cassia hebecarpa</i>) PM: forests	Wild Senna	W1	S2S3	G5
<i>Senna marilandica</i> (= <i>Cassia marilandica</i>) PM: forests	Maryland Wild Senna	W1	S2S3	
<i>Sesuvium maritimum</i> C: seabeaches, marshes	Slender Sea-purslane	W1	S1	G5
<i>Sesuvium portulacastrum</i> C: seabeaches	Shoreline Sea-purslane	W1	S1S2	G5?
<i>Sida elliottii</i> C: stream banks, sandy woodlands	Elliott's Fan-petal	W1	S1	G4G5
<i>Sida inflexa</i> (not in RAB) C: fall-line rock outcrop?	Fernald's Fan-petal	W3	C2*	SH?
<i>Sideroxylon lycioides</i> (= <i>Bumelia lycioides</i>) CP: maritime forests, bluffs or forests over calcareous or mafic rocks	Buckthorn Bumelia	W1	S2?	G5
<i>Silene caroliniana</i> PSC: granite flatrocks and sandy woods	Carolina Pink	W1	S1S2	G5
<i>Silphium asteriscus</i> var. <i>laevicaule</i> (= <i>S. dentatum</i>) PM: forests	Starry Rosinweed	W1	S2	
<i>Silphium compositum</i> ssp. <i>reniforme</i> (= <i>S. comp.</i> var. <i>ren.</i>) PM: forests and forest edges	Kidneyleaf Rosinweed	W1	S2	
<i>Silphium perfoliatum</i> ssp. <i>connatum</i> (not in RAB) P: floodplains, rich alluvial woods	Virginia Cup-plant	W1	S1	G5T?

<i>Silphium perfoliatum</i> ssp. <i>perfoliatum</i> PM: floodplains	Northern Cup-plant	W1	S1	G5T?
<i>Smilax hugeri</i> MP: deciduous forests	Huger's Carrionflower	W1	S1?	G4
<i>Solanum gracilius</i> (= <i>S. gracile</i>) C: dunes	Graceful Nightshade	W1	S1?	G?
<i>Solidago arguta</i> var. <i>arguta</i> (= <i>S. arguta</i> [pro parte]) M: forests		W1	S2?	G5TU
<i>Solidago caesia</i> var. <i>hispida</i> (= <i>S. curtisii</i> var. <i>pubens</i>) M: cove forests		W1	S1	
<i>Solidago gracillima</i> (not in NC in RAB) C: savannas, , boggy sites, peaty places		W1	S1S2	G?
<i>Solidago latissimifolia</i> (not in RAB) M: forests		W1	S2?	G?
<i>Solidago leavenworthii</i> C: savannas, pocosin borders, peaty seeps	Leavenworth's Goldenrod	W1	S1	G?
<i>Solidago patula</i> var. <i>strictula</i> SC: pocosins, peaty places		W1	S1	G5T5
<i>Solidago porteri</i> (not in RAB) M: granitic domes	Porter's Goldenrod	W3	C2*	SR GHQ
<i>Solidago puberula</i> var. <i>puberula</i> MP: bogs and wet meadows	Downy Goldenrod	W1	S2	G5T?
<i>Solidago rigida</i> PM: glades, woodlands, and clearings over mafic rocks	Bold Goldenrod	W1	S2	G5
<i>Solidago tortifolia</i> CS: dry savannas and sandhills	Twisted-leaf Goldenrod	W1	S1	G3G5
<i>Solidago ulmifolia</i> PM: wooded stream banks	Elm-leaf Goldenrod	W1	S1	G5
<i>Spergularia marina</i> C: salt marshes and tidal flats	Saltmarsh Sandspurrey	W1	S1?	G5
<i>Sphenopholis filiformis</i> CP: savannas, pinelands, other sandy woods	Longleaf Wedgescale	W1	S2	G3G4
<i>Sphenopholis obtusata</i> var. <i>major</i> (= <i>S. intermedia</i>) MPC: rich woods	Prairie Wedgescale	W1	S2	G5T5
<i>Spilanthes</i> (see <i>Acemella</i>)				
<i>Spiraea alba</i> var. <i>alba</i> M: bogs	Narrowleaf Meadowsweet	W1	S2?	G5T?
<i>Spiraea alba</i> var. <i>latifolia</i> M: bogs	Broadleaf Meadowsweet	W1	S2?	G5T5
<i>Spiraea betulifolia</i> ssp. <i>corymbosa</i> (= <i>S. betulifolia</i>) P: open woodlands, thin soil over rock	Shinyleaf Meadowsweet	W1	S1	G4G5T4
<i>Spiranthes brevilabris</i> var. <i>floridana</i> (= <i>S. grac.</i> var. <i>f.</i>) C: moist sites	Florida Ladies'-tresses	W1	S1	G?T?
<i>Spirodela polyrrhiza</i> C: ponds, stagnant waters	Common Water-flaxseed	W1	S2?	G5
<i>Sporobolus asper</i> (not in RAB) P: habitat not known	Rough Dropseed	W3	S1	G5
<i>Sporobolus virginicus</i> C: brackish marshes	Saltmarsh Dropseed	W1	S1	G5
<i>Stachys nuttallii</i> MS: bogs	Heartleaf Hedge-nettle	W1	S1	G5?
<i>Stachys tenuifolia</i> var. <i>tenuifolia</i> (= <i>S. tenuifolia</i>) C: swamp forests	Smooth Hedge-nettle	W1	S1	G5T4

<i>Stewartia ovata</i>	Mountain Camellia	W1	S2	G4
MP: bluffs and forests, usually with rhododendron				
<i>Streptopus roseus</i> var. <i>roseus</i> (= <i>S. roseus</i> [pro parte])	Southern Twisted-stalk	W1	S1	G5T?
M: high elevation forests, mainly northern hardwoods and spruce-fir				
<i>Stylisma aquatica</i> (= <i>Bonamia aquatica</i>)	Water Dawnflower	W1	S1	G3G4
C: moist sandy pinelands				
<i>Stylisma patens</i> ssp. <i>angustifolia</i> (= <i>Bonamia p.</i> var. <i>a.</i>)	Narrowleaf Dawnflower	W1	S1?	G5T?
CS: sandy pinelands				
<i>Swertia</i> (see <i>Frasera</i>)				
<i>Thalictrum macrostylum</i>	A Meadowrue	W1	S2?	G4?
CSPM: bogs and wet woods				
<i>Thalictrum pubescens</i> var. <i>hepaticum</i> (not in RAB)	King-of-the-meadow	W1	SR	G5TU
MP: bogs and wet woods				
<i>Thalictrum subrotundum</i> (not in NC in RAB)	A Meadowrue	W3	SR	G1G2
?				
<i>Thermopsis villosa</i>	Aaron's-rod	W1	S2?	G?
M: forests and openings				
<i>Thuja occidentalis</i>	Amer. Arborvitae, Flat-cedar	W4	SE	
M: calcareous rocks				
<i>Tilia americana</i> var. <i>americana</i> (= <i>T. americana</i>)	American Basswood	W1	S1?	G5T?
M: rich cove forests				
<i>Tilia americana</i> var. <i>caroliniana</i> (= <i>T. caroliniana</i>)	Carolina Basswood	W1	S1?	G5T?
C: wet marl forests, other outer coastal plain forests				
<i>Tradescantia virginiana</i>	Virginia Spiderwort	W1	S1	G5
P: rich woods on circumneutral soils				
<i>Trichomanes</i> sp. 1 (not in RAB)	A Filmy Fern Gametophyte	W1	S1S2	G?
M: moist grottoes				
<i>Trichostema setaceum</i> (not in RAB)	Narrowleaf Bluecurls	W1	S2	G5
SP: dry woodlands; granite flatrocks				
<i>Trifolium carolinianum</i>	Carolina Clover	W1	S1?	G5
C: sandy open areas				
<i>Trifolium reflexum</i>	Buffalo Clover	W1	S2?	G5
PMSC: open woods and clearings				
<i>Trillium rugelii</i> (= <i>T. cernuum</i> , sensu RAB)	Southern Nodding Trillium	W1	S2?	G?
PM: rich woods and coves over mafic and calcareous rocks				
<i>Triosteum angustifolium</i>	Narrowleaf Tinker's-weed	W1	S2?	G5
P: thin woodlands over mafic rocks				
<i>Triosteum aurantiacum</i>	Coffee Tinker's-weed	W1	S2?	G5
M: rich cove forests over mafic rocks				
<i>Triphora trianthophora</i>	Three Birds Orchid	W1	S2?	G4
MC: moist forests				
<i>Typha domingensis</i>	Southern Cattail	W1	S2?	G4G5
C: marshes				
<i>Uniola</i> (see <i>Chasmanthium</i>)				
<i>Utricularia cornuta</i>	Horned Bladderwort	W1	S1	G5
CM: bogs				
<i>Utricularia macrorhiza</i> (= <i>U. vulgaris</i>)	A Bladderwort	W	S1?	G5
C: pools and ponds				
<i>Valerianella umbilicata</i>	Woodland Cornsalad	W1	S1	G3G5
PM: rich woods and disturbed sites				
<i>Verbena scabra</i>	Sandpaper Vervain	W1	S2?	G5
C: marsh edges, shell middens				

<i>Verbena stricta</i> C: disturbed sites	Hoary Vervain	W1	S1	G5
<i>Verbesina helianthoides</i> (not in RAB) M: open woods and glades	A Crownbeard	W3	SR	G5
<i>Veronica anagallis-aquatica</i> M: bogs, streambanks, rivulets	Blue Water Speedwell	W1	S1	G5
<i>Veronicastrum virginicum</i> MP: bogs, wet meadows	Culver's-root	W1	S2?	G5
<i>Vigna luteola</i> C: marsh edges, wet open areas	Wild Cowpea	W1	S1?	G5
<i>Viola brittoniana</i> var. <i>brittoniana</i> CSP: low wet places	Northern Coastal Violet	W1	S2?	G4G5T?
<i>Viola brittoniana</i> var. <i>pectinata</i> CS: low wet places	Northern Coastal Violet	W1	S1	G4G5T3
<i>Viola conspersa</i> MP: rich cove forests, bottomlands, and seepage slopes	American Dog Violet	W1	S2?	G5
<i>Viola villosa</i> CSP: moist places, especially pocosin edges	Carolina Violet	W1	S1?	G5
<i>Viola walteri</i> MP: rich cove forests and other rich forests	Prostrate Blue Violet	W1	S1S2	G4G5
<i>Vittaria</i> sp. 1 MP: moist grottoes	Appalachian Gametophyte	W1	S2?	G?
<i>Wolffia brasiliensis</i> (= <i>W. papulifera</i>) C: sluggish creeks	Watermeal, Mudmary's	W1	S2	G5
<i>Xerophyllum asphodeloides</i> MP: dry ridges	Beargrass, Eastern Turkeybeard	W1	S2	G3
<i>Xyris baldwiniana</i> CSP: bogs, savannas, and pocosins	Baldwin's Yellow-eyed-grass	W1	S2	G5
<i>Xyris difformis</i> var. <i>curtissii</i> (= <i>X. curtissii</i>) CSP: savannas and other wet areas	Curtiss's Yellow-eyed-grass	W1	S2?	G5T5
<i>Xyris difformis</i> var. <i>floridana</i> (not in RAB) C: savannas	Florida Yellow-eyed-grass	W1	S1	G5T?
<i>Xyris laxifolia</i> var. <i>iridifolia</i> (= <i>X. iridifolia</i>) CS: limesink ponds, pineland pools, marshes	Iris-leaf Yellow-eyed-grass	W1	S2?	G3G5T?
<i>Xyris smalliana</i> CS: pineland pools, limesink ponds, shores	Small's Yellow-eyed-grass	W1	S1?	G5
<i>Yucca aloifolia</i> C: dunes	Aloe Yucca	W1	S2?	G5
<i>Yucca flaccida</i> (= <i>Y. filamentosa</i> var. <i>smalliana</i>) CSPM: open, dry woodlands	Weakleaf Yucca	W1	S1	G5
<i>Zannichellia palustris</i> C: calcareous or brackish waters of pools and estuaries	Horned-pondweed	W1	S2?	G5
<i>Zizania aquatica</i> C: freshwater marshes	Wild Rice	W1	S2	G5

MOSSES

[there are currently no Watch List mosses]

LIVERWORTS AND HORNWORTS

<i>Acrobolbus ciliatus</i>	A Liverwort	W1	S1	G?
M: on rocks in spray zones of waterfalls in humid gorges				
<i>Aneura sharpii</i>	A Liverwort	W1	S1	G?
M:				
<i>Anthoceros ascendens</i>	A Hornwort	W1	SH	G?
CP:				
<i>Cephaloziella massalongi</i>	A Liverwort	W1	S1	G2G3
M:				
<i>Cheilolejeunea myriantha</i>	A Liverwort	W1	SH	G3G4
MC: on tree bark in sandhills or mountain forests				
<i>Cheilolejeunea rigidula</i>	A Liverwort	W1	S1	G5
C: on bark in maritime forests, and in blackwater swamp forests				
<i>Cololejeunea ornata</i>	A Liverwort	W3	S1	G?
M:				
<i>Diplophyllum andrewsii</i>	A Liverwort	W1	S2	G?
M:				
<i>Diplophyllum obtusatum</i>	A Liverwort	W1	S1	G?
M:				
<i>Frullania oakesiana</i>	A Liverwort	W1	S1S2	G?
M:				
<i>Frullania plana</i>	A Liverwort	W1	S2	G?
MP:				
<i>Harpanthus drummondii</i>	A Liverwort	W1	S1	G4?
M: on damp, decaying logs in moist forests				
<i>Lejeunea bermudiana</i>	A Liverwort	W1	S1	G3G4
C: on marl outcrops or on decaying logs in blackwater swamps				
<i>Lejeunea cavifolia</i>	A Liverwort	W1	S1	G5
M: on shaded mafic rocks				
<i>Leptoscyphus cuneifolius</i>	A Liverwort	W1	S1?	G4G5
M: on bark of Fraser Firs or on moist rock, in spruce-fir forests				
<i>Lophocolea muricata</i>	A Liverwort	W1	S1	G5
M: on rocks or bark in humid gorges				
<i>Lopholejeunea muelleriana</i>	A Liverwort	W1	SH	G4G5
C: on bark of gums and cypresses in blackwater swamp forests				
<i>Lophozia attenuata</i>	A Liverwort	W1	S2	G5
M: on rocks in spruce-fir forests				
<i>Lophozia capitata</i>	A Liverwort	W1	SH	G4?
CP: in moist depressions in savannas or on clay-pans in the piedmont				
<i>Marsupella paroica</i>	A Liverwort	W1		G?
M:				
<i>Megaceros sp. 1</i>	A Liverwort	W1	S2S3	G?
M:				
<i>Metzgeria pubescens</i>	A Liverwort	W1	SH	G?
M:				
<i>Metzgeria temperata</i>	A Liverwort	W1		G?
M:				
<i>Metzgeria uncigera</i>	A Liverwort	W1	S1	G?
C:				
<i>Nardia lescurii</i>	A Liverwort	W1	S2	G3?
MPSC: on moist soil or rock in humid places				
<i>Plagiochasma wrightii</i>	A Liverwort	W1	S1	G?
M: on calcareous rocks				

<i>Plagiochila ludoviciana</i>	A Liverwort	W1	S1	G5
CM: on bark in coastal plain swamps, on bark or moist rock in mountain gorges				
<i>Plagiochila undata</i>	A Liverwort	W1	S2	G?
CMP: on rocks or bark				
<i>Ptilidium ciliare</i>	A Liverwort	W1	S1	G5
M:				
<i>Ptilidium pulcherrimum</i>	A Liverwort	W1	S1	G5
M:				
<i>Radula tenax</i>	A Liverwort	W1	S2	G?
M: on moist rocks or bark in humid gorges and cove forests				
<i>Scapania mucronata</i>	A Liverwort	W1	S1	G?
M:				
<i>Tritomaria exsectiformis</i>	A Liverwort	W1	S1	G5
M: on high elevation rocky summits				

LICHENS

<i>Porpidia cineroatra</i>	A Crustose Lichen	W1	S1	G?
M: high elevation rocky summits				
<i>Porpidia diversa</i>	A Crustose Lichen	W1	S1	G2G3
M: high elevation rocky summits				
<i>Porpidia herteliana</i>	A Crustose Lichen	W1	S1?	G2G3
M: high elevation rocky summits				
<i>Porpidia macrocarpa</i>	A Crustose Lichen	W1	S1?	G4G5
M: high elevation rocky summits				
<i>Porpidia tuberculosa</i>	A Crustose Lichen	W1	S1	G?
M: high elevation rocky summits				

REGIONALLY RARE SPECIES (WITHIN-STATE DISJUNCT) LIST

A list of North Carolina's rare plants is, of course, determined by the arbitrary, political boundaries of the state. Biological rarity, however, is determined by the natural boundaries of physiography, geology, soils, and climate. These and other physical, biological, and historic factors have determined the evolutionary history and phytogeography of plants currently occupying what is now called "North Carolina." Rarity in one part of the state, especially when disjunct from the region of greater abundance, can have as much biological significance as disjunction from another state. Disjunct populations nearly always have some level of genetic differentiation from populations in the main part of a species range. If this genetic differentiation is great enough (and obvious enough), the disjunct population may be recognized as a separate species, subspecies, or variety. In many cases, however, the genetic differentiation is not great enough (or is not obvious enough with the relatively crude taxonomic tools which have been applied to most taxa) to have warranted the naming of a distinct taxon. Further study will likely show that many disjunct populations do warrant taxonomic status. Preservation of biodiversity requires not only the preventing the extinction of species, but maintaining the genetic diversity within the species. The long-term viability of a species is dependent on the genetic diversity represented within and between different populations of the species. Disjunct and peripheral populations are especially likely to contain genetic material rare or absent in the bulk of the species' populations.

Moreover, within-state disjunctions are likely to serve as indicators of regionally unique or unusual habitats. Attention to such species is especially important in county natural area inventories and regional planning.

The following list of Watch Category 6 plants is not exhaustive, but represents some of the most important and significant within-state disjunctions. An emphasis has been placed on species which are disjunct rather than peripheral -- that is, which have a demonstrable gap in their North Carolina ranges. Examples are Rhododendron catawbiense, which is rather common at high to medium elevations in the mountains, but occurs in small, disjunct populations in the lower Piedmont and upper Coastal Plain, and Pogonia ophioglossoides, a primarily Coastal Plain species, occurring in rare bogs in the mountains.

MOUNTAINS

Aristida purpurascens var. *virgata* (= *A. virgata*)
Bartonia virginica
Brasenia schreberi
Calopogon tuberosus
Cardamine bulbosa
Chamaedaphne calyculata (= *Cassandra calyculata*)
Cleistes divaricata
Clematis crispa
Coreopsis gladiata
Corydalis micrantha ssp. *australis*
Cuscuta corylii
Eriocaulon compressum
Eriocaulon decangulare
Eryngium integrifolium
Gaylussacia dumosa
Justicia americana
Kalmia carolina (= *K. angustifolia* var. *caroliniana*)
Lespedeza angustifolia
Orontium aquaticum
Platanthera cristata (= *Habenaria cristata*)
Pogonia ophioglossoides
Pycnanthemum flexuosum
Rhynchospora gracilentia

Sabatia brachiata
Sium suave
Smilax laurifolia
Toxicodendron vernix (= Rhus vernix)
Triadenum virginicum (= Hypericum virginicum)
Utricularia biflora (including U. gibba)
Utricularia subulata

PIEDMONT

Actaea pachypoda
Aralia nudicaulis
Aralia racemosa
Asplenium montanum (lower Piedmont only)
Berchemia scandens
Campanulastrum americanum (= Campanula americanum)
Carex torta
Cornus alternifolia
Corydalis micrantha ssp. australis
Dicentra cucullaria
Dryopteris cristata
Dryopteris goldiana
Dryopteris intermedia
Eleocharis microcarpa
Eriocaulon compressum
Eryngium integrifolium
Hydrophyllum canadense
Hydrophyllum virginianum
Lachnocaulon anceps
Liatris scariosa
Lycopodium tristachyum
Magnolia virginiana
Myrica heterophylla
Paronychia argyrocoma
Phalaris arundinacea
Pieris floribunda
Pinus strobus (lower Piedmont only)
Platanthera flava var. flava (= Habenaria flava var. f.)
Pogonia ophioglossoides
Rhododendron catawbiense
Rhynchospora chalarocephala
Salix humilis
Sarracenia flava
Sarracenia purpurea
Saxifraga micranthidifolia
Scirpus americanus
Sium suave
Smilax laurifolia
Symplocarpus foetidus
Tsuga canadensis (lower Piedmont only)
Xyris baldwiniana
Xyris curtissii
Xyris jupicai

SANDHILLS

Comptonia peregrina
Drosera rotundifolia
Leiophyllum buxifolium
Rhododendron catawbiense
Rhododendron minus

COASTAL PLAIN

Anemone quinquefolia
Aster cordifolius
Castilleja coccinea
Clematis ochroleuca
Clematis virginiana
Delphinium tricornis
Leiophyllum buxifolium
Lilium superbum
Magnolia tripetala
Pellaea atropurpurea
Platanthera lacera (= *Habenaria lacera*)
Stenanthium gramineum
Viola blanda

POTENTIAL NEW-TO-NORTH CAROLINA PLANTS

The following list is of species not currently known to occur in North Carolina, but which are considered to have some possibility of being found in North Carolina, based on their currently known range and habitat preferences. Most are species which occur in the adjacent states of South Carolina, Georgia, Tennessee, or Virginia, in habitats at least relatively similar to habitats known to exist in North Carolina. The purpose of this list is to foster understanding of the flora of North Carolina by challenging botanists to find new state records; this list should give field investigators an idea of some of the species that may be native components of North Carolina's flora. While some of these species may have relatively remote chances of being found in North Carolina, the likelihood of finding new state records is greatly increased by being aware of the possibilities and by species-directed searching. State records of native vascular plants are currently being found at the rate of about five per year. Our knowledge of North Carolina's flora is still quite imperfect, and many natural areas are being destroyed before they can be investigated; certainly a number of native species have been extirpated from North Carolina before they were ever documented as occurring in the state.

Following each species is the North Carolina province in which the species is considered most likely to be found. Where possible, a description of the typical habitat of the species in the vicinity of North Carolina is also given. Sometimes, the nearest known occurrence(s) to North Carolina are also listed, with the distance from North Carolina in number of counties in brackets. For instance [1] indicates that the species has been reported from a county immediately adjacent to North Carolina; [5] indicates that the species has been reported from a county 5 counties away from the North Carolina border. An average county width in and around North Carolina is about 25 miles, so [5] indicates an approximate distance from North Carolina of 100-125 miles. While distance from the state is an interesting piece of information, it is probably a poor indicator of probability of occurrence in North Carolina, since long distance disjunctions to the mountains (from the north) and to the coastal plain (from the south) are frequent. New records for the state found in 1989 included Calamagrostis cainii (nearest former record in county adjacent to NC), Amphicarpum floridanum (nearest former record 4 counties from NC), and Arabis hirsuta (nearest former record 6 counties from NC). In the coming years, some of the species on this list will almost certainly be added to the flora of North Carolina, and other additions will be species not listed here.

- Agalinis auriculata (= Tomanthera auriculata) - P (mafic glades) - York County, SC [1]
- Aletris obovata - C (savannas) - Beaufort Co. SC [4 counties]
- Allium oxyphilum - PM (shale barrens, glades) - VA
- Alnus rugosa - M - Nelson Co. VA
- Amphianthus pusillus - P (pools on granitic flatrocks) - SC
- Aralia hispida - M (dry rocky woods) - VA
- Aristida spiciformis - C (savannas) - Hampton Co. SC [5]
- Asclepias cinerea - C (savannas) - Hampton & Jasper cos. SC [5]
- Asclepias michauxii - C (savannas and pinelands) - Williamsburg & Florence cos, SC [2]
- Asclepias obovata - C (sandy pinelands) - Charleston Co. SC [3]
- Asclepias perennis - C (swamp forests) - Marion Co. SC [2]
- Asplenium trichomanes ssp. quadrivalens - MP (calcareous outcrops) - VA
- Asplenium X trudellii - PM (moist cliffs, acidic outcrops and bluffs) - Pittsylvania & Lee cos. VA [1]
- Batis maritima - C (salt and brackish marshes) - Charleston Co. SC [3]
- Berlandiera pumila - S (sandy woods and fields) - Chesterfield & Darlington cos. SC [1]
- Bothriochloa saccharoides - M (dry openings) - TN
- Bouteloua curtipendula - PM (calcareous or mafic glades) - Pulaski & Montgomery cos. VA [2]
- Bromus kalmii - M - Augusta & Bath cos. VA [4]
- Carex amplisquama
- Carex brevior (C. molesta) - M (dry woods) - Wythe Co. VA [2]
- Carex careyana - M (rich cove forests over calcareous or mafic rocks) - Montgomery Co. VA [3]
- Carex conjuncta - MC (mesic woods) - Southampton & Russell cos. VA [1]
- Ceratiola ericoides - CS (sandhills) - Horry Co. SC [1]
- Cheilanthes castanea - M (dry, shaly outcrops) - Carroll, Pulaski, & Montgomery cos. VA [1]

Cheilanthes feei - M (calcareous outcrops) - Pulaski Co. VA [2]
Cirsium nuttallii - C
Clematis reticulata - C
Clematis spp.
Collinsia verna - M
Coreopsis rosea - C (drawdown zones of blackwater rivers, limesink ponds, clay-based Carolina bays) - Horry Co. SC [1]
Cornus canadensis - M (mountain forests) - Bath & Albemarle cos. VA [4]
Cornus rugosa - M - Giles & Craig cos. VA [3]
Cypripedium kentuckiense
Cystopteris fragilis - M (acidic cliffs) - Giles Co., VA [3]
Dasistoma macrophylla - P
Delphinium carolinianum - P (glades)
Desmodium floridanum - C
Diarrhena americana - M (rich woods) - TN, VA
Dioscorea floridana - C
Draba aprica - P (granite outcrops)
Dyschoriste humistrata - C
Dyschoriste oblongifolia - C
Elephantopus elatus - C
Ellisia nyctelea
Elytraria caroliniensis - C
Equisetum fluviatile - M (wet places, shallow water) - VA
Eriocaulon ravenelii - C
Eriogonum tomentosum - S (sandhills)
Eryngium aquaticum var. *ravenelii* - C
Eryngium yuccifolium var. *synchaetum* - C
Erythronium albidum - M (rich woods, basic soils) - VA
Floerkea proserpinacoides - P
Galactia elliottii - C
Galium boreale - M - Wythe & Scott cos. VA [2]
Galium concinnum - M - Giles Co. VA [3]
Gaura filipes - CS
Gleditsia aquatica - C (swamp forests)
Glyceria acutiflora - M (wet openings) - Wythe Co. VA [2]
Glyceria canadensis (sensu stricto, non RAB) - M (high elevation seeps) - VA
Glyceria grandis - MC - Floyd & James City cos. VA [2]
Habenaria quinqueseta - C
Heuchera alba - M - Highland Co. VA [5]
Houstonia canadensis - M - Wythe & Pulaski cos. VA [2]
Hudsonia ericoides - S (sandhills) - SC
Hydrolea corymbosa - C
Hypericum harperi - C (clay-based Carolina bays) - SC
Isoetes macrospora - M (shoals in cold streams) - TN
Kalmia hirsuta - C
Lechea maritima - C - Chesapeake & Virginia Beach, VA [1]
Liatris tenuifolia - S (sandhills)
Linnaea borealis - M (high elevation forests) - TN [1]
Lithospermum caroliniense - C
Ludwigia spathulata - C (clay-based Carolina bays) - Lexington & Aiken cos., SC [4]
Magnolia pyramidata - P
Maianthemum stellatum (= *Smilacina stellata*) - M - Montgomery Co. VA; TN [3]
Micranthemum micranthemoides - C (tidal marshes) - VA
Nolina georgiana - S (sandhills) - SC
Ophioglossum engelmannii - MP (glades over calcareous or mafic rocks) - TN

Oryzopsis racemosa - M (dry woods) - Wythe Co. VA [2]
Panicum hirstii - CS (limesink ponds, clay-based Carolina bays)
Paspalum plicatulum - C
Pellaea glabella - M - Wythe Co. VA [2]
Pilularia americana - PM (muddy wet places, granite outcrops, pond margins) - TN, SC
Pinus glabra - C
Pityopsis ruthii - M (riverside outcrops) - TN [1]
Platanthera leucophaea - M (bogs and wet meadows) - VA
Polygala nana - C (savannas) - SC
Polygonella gracilis - SC (sandhills)
Pyrola chlorantha - M
Pyrola secunda - M
Quercus durandii - C
Quercus georgiana - P (granitic outcrops) - SC
Quercus oglethorpensis - C
Ratibida pinnata - P (diabase glades) - York Co. SC [1]
Rhamnus lanceolata - M - Pulaski Co. VA [2]
Ribes americanum - M
Ribes echinellum - CP
Ruellia ciliosa - C
Sabatia brevifolia - C
Sagittaria rigida
Sagittaria spatulata
Salix spp.
Schizachne purpurascens - M - Highland Co. VA
Scleria baldwinii - C (clay-based Carolina bays) - Sumter, Berkeley, & Charleston cos., SC [3]
Scutellaria mellichampii - C
Sedum nevii (sensu stricto) - M (rock outcrops) - TN
Silphium dentatum var. *gatesii*
Smilax pumila - C (moist hardwood forests, swamps) - Horry Co. SC
Sparganium androcladum - M (ponds and streams) - TN
Sparganium eurycarpum - M (ponds and streams) - VA
Spigelia marilandica - PM
Spiranthes lacera var. *lacera* - M (open areas) - TN, VA
Spiranthes lucida - M (calcareous seeps) - TN, VA
Sporobolus curtissii - C (savannas)
Sporobolus neglectus - M - Montgomery & Lee cos. VA
Stillingia aquatica - C (clay-based Carolina bays) - Allendale, Barnwell, & Hampton cos., SC [6]
Taenidia (*Pseudotaenidia*) *montana* - MP (dry shaly woods) - VA, WV
Thalictrum steeleanum - Patrick & Roanoke Co. VA [1]
Triadenum tubulosum - C
Trillium cernuum (sensu stricto, non RAB) - M (wet woods) - VA
Trillium decumbens - M (rich woods) - GA, TN
Trillium persistens - MP (acid woods under hemlock) - GA, SC
Trillium reliquum - PC (rich river bluffs) - Aiken Co. SC [5]
Vaccinium angustifolium - M - Wythe, Montgomery, & Pulaski cos. VA [2]
Vaccinium myrtilloides - M - Pulaski & Roanoke cos. VA
Vaccinium oxycoccos - M (bogs) - WV
Vernonia altissima
Vernonia angustifolia var. *scaberrima* -
Veronica scutellata - M - Grayson & Carroll cos. VA
Viburnum obovatum - C
Waldsteinia lobata - MP (rich woods, bluffs, streambanks, floodplains) - Oconee Co. SC [1]
Zanthoxylum americanum - PMC (rich woods, over calcareous or mafic rocks) - Berkeley Co. [3]

1. The first part of the paper is devoted to a general discussion of the problem of the existence of solutions of the system of equations

$$F(x, y, z) = 0, \quad G(x, y, z) = 0, \quad H(x, y, z) = 0,$$

where F, G, H are functions of three variables x, y, z .

2. In the second part we consider the case when the functions F, G, H are linear functions of the variables x, y, z .

3. In the third part we consider the case when the functions F, G, H are quadratic functions of the variables x, y, z .

4. In the fourth part we consider the case when the functions F, G, H are cubic functions of the variables x, y, z .

5. In the fifth part we consider the case when the functions F, G, H are quartic functions of the variables x, y, z .

6. In the sixth part we consider the case when the functions F, G, H are quintic functions of the variables x, y, z .

7. In the seventh part we consider the case when the functions F, G, H are sextic functions of the variables x, y, z .

8. In the eighth part we consider the case when the functions F, G, H are septic functions of the variables x, y, z .

9. In the ninth part we consider the case when the functions F, G, H are octic functions of the variables x, y, z .

10. In the tenth part we consider the case when the functions F, G, H are nonic functions of the variables x, y, z .

11. In the eleventh part we consider the case when the functions F, G, H are decic functions of the variables x, y, z .

12. In the twelfth part we consider the case when the functions F, G, H are undecic functions of the variables x, y, z .

13. In the thirteenth part we consider the case when the functions F, G, H are duodecic functions of the variables x, y, z .

14. In the fourteenth part we consider the case when the functions F, G, H are tridecic functions of the variables x, y, z .

15. In the fifteenth part we consider the case when the functions F, G, H are quattuordecic functions of the variables x, y, z .

16. In the sixteenth part we consider the case when the functions F, G, H are quindecimic functions of the variables x, y, z .

17. In the seventeenth part we consider the case when the functions F, G, H are sexdecimic functions of the variables x, y, z .

18. In the eighteenth part we consider the case when the functions F, G, H are septendecimic functions of the variables x, y, z .

19. In the nineteenth part we consider the case when the functions F, G, H are octodecimic functions of the variables x, y, z .

20. In the twentieth part we consider the case when the functions F, G, H are nonadecimic functions of the variables x, y, z .

21. In the twenty-first part we consider the case when the functions F, G, H are vigintic functions of the variables x, y, z .

22. In the twenty-second part we consider the case when the functions F, G, H are unguintic functions of the variables x, y, z .

23. In the twenty-third part we consider the case when the functions F, G, H are unsexcentic functions of the variables x, y, z .

24. In the twenty-fourth part we consider the case when the functions F, G, H are unseptcentic functions of the variables x, y, z .

25. In the twenty-fifth part we consider the case when the functions F, G, H are unoctcentic functions of the variables x, y, z .

26. In the twenty-sixth part we consider the case when the functions F, G, H are unnoncentic functions of the variables x, y, z .

27. In the twenty-seventh part we consider the case when the functions F, G, H are unquadric functions of the variables x, y, z .

28. In the twenty-eighth part we consider the case when the functions F, G, H are unquintic functions of the variables x, y, z .

29. In the twenty-ninth part we consider the case when the functions F, G, H are unsextic functions of the variables x, y, z .

30. In the thirtieth part we consider the case when the functions F, G, H are unseptic functions of the variables x, y, z .

31. In the thirty-first part we consider the case when the functions F, G, H are unoctic functions of the variables x, y, z .

32. In the thirty-second part we consider the case when the functions F, G, H are unnonic functions of the variables x, y, z .

33. In the thirty-third part we consider the case when the functions F, G, H are undecic functions of the variables x, y, z .

34. In the thirty-fourth part we consider the case when the functions F, G, H are unduodecic functions of the variables x, y, z .

35. In the thirty-fifth part we consider the case when the functions F, G, H are undecimic functions of the variables x, y, z .

36. In the thirty-sixth part we consider the case when the functions F, G, H are unduodecic functions of the variables x, y, z .

37. In the thirty-seventh part we consider the case when the functions F, G, H are undecimic functions of the variables x, y, z .

38. In the thirty-eighth part we consider the case when the functions F, G, H are unduodecic functions of the variables x, y, z .

39. In the thirty-ninth part we consider the case when the functions F, G, H are undecimic functions of the variables x, y, z .

40. In the fortieth part we consider the case when the functions F, G, H are unduodecic functions of the variables x, y, z .

41. In the forty-first part we consider the case when the functions F, G, H are undecimic functions of the variables x, y, z .

42. In the forty-second part we consider the case when the functions F, G, H are unduodecic functions of the variables x, y, z .

43. In the forty-third part we consider the case when the functions F, G, H are undecimic functions of the variables x, y, z .

44. In the forty-fourth part we consider the case when the functions F, G, H are unduodecic functions of the variables x, y, z .

45. In the forty-fifth part we consider the case when the functions F, G, H are undecimic functions of the variables x, y, z .

46. In the forty-sixth part we consider the case when the functions F, G, H are unduodecic functions of the variables x, y, z .

47. In the forty-seventh part we consider the case when the functions F, G, H are undecimic functions of the variables x, y, z .

48. In the forty-eighth part we consider the case when the functions F, G, H are unduodecic functions of the variables x, y, z .

49. In the forty-ninth part we consider the case when the functions F, G, H are undecimic functions of the variables x, y, z .

50. In the fiftieth part we consider the case when the functions F, G, H are unduodecic functions of the variables x, y, z .



